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NOTE

An Arabian Troubleshooting Guide is included as part of this Schematic Package Supplement. The Arabian Troubleshooting Guide contains Atari CAT Box* troubleshooting procedures and signal name descriptions.



Schematic Package Supplement to



Operators Manual

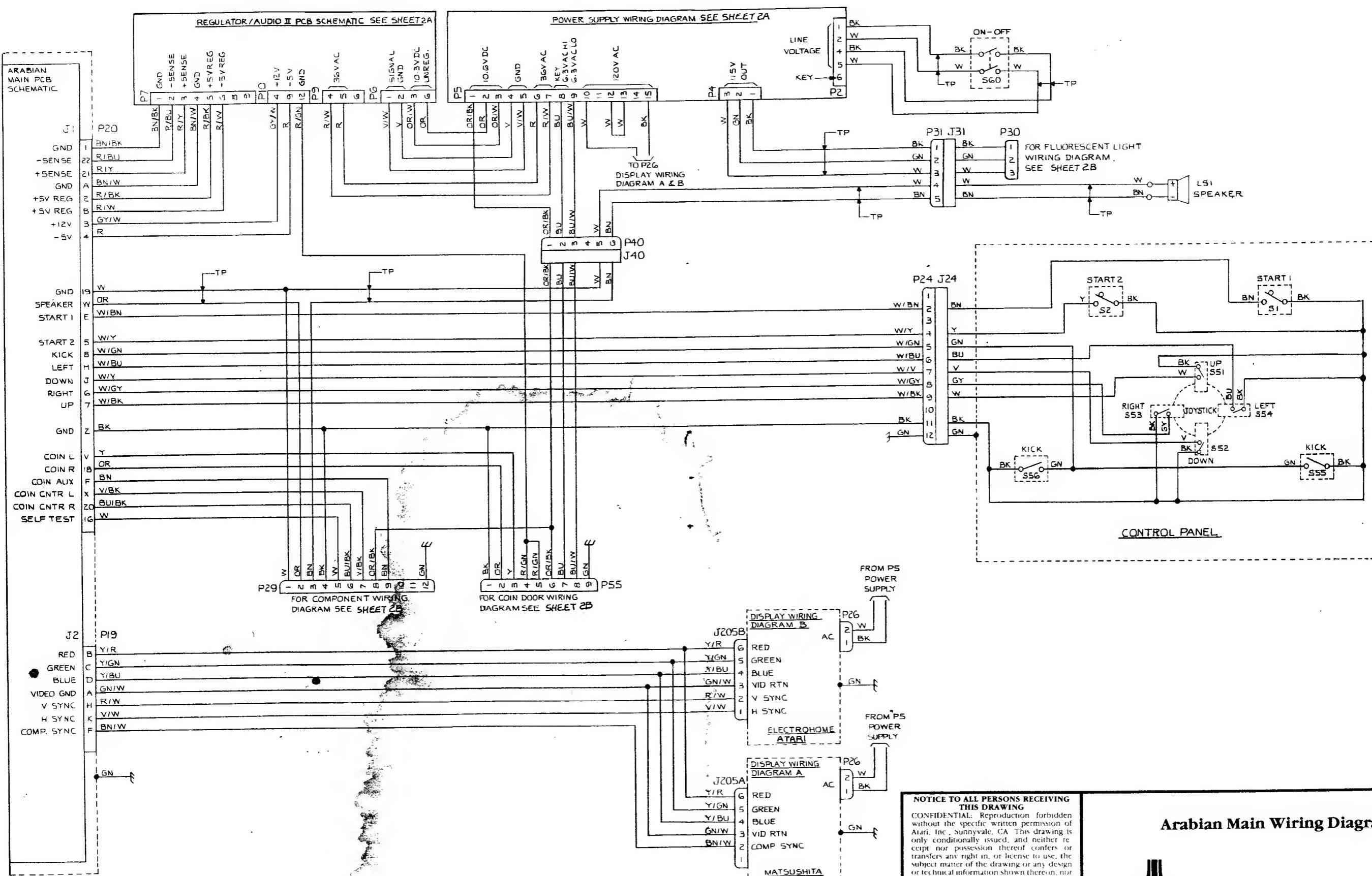
Includes
Troubleshooting Guide

*Manufactured under license from Sun Electronics Inc.

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SD-237 - SHEET 1A
Supplement

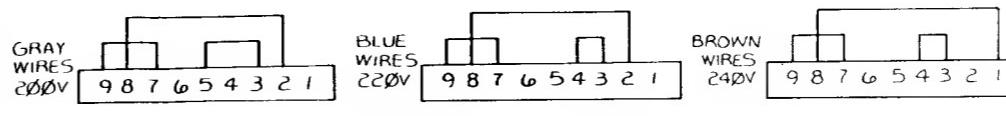
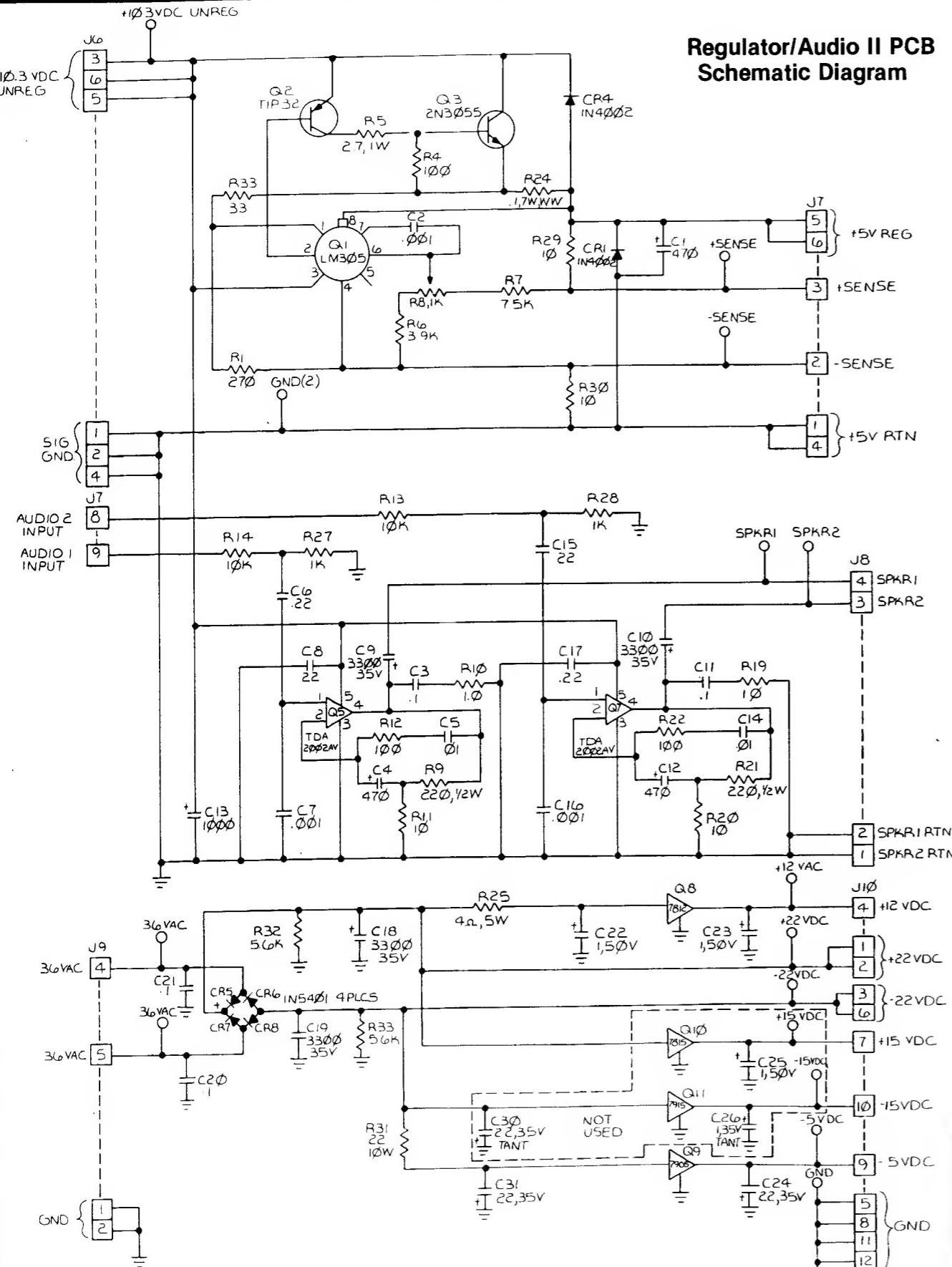


Arabian Main Wiring Diagram

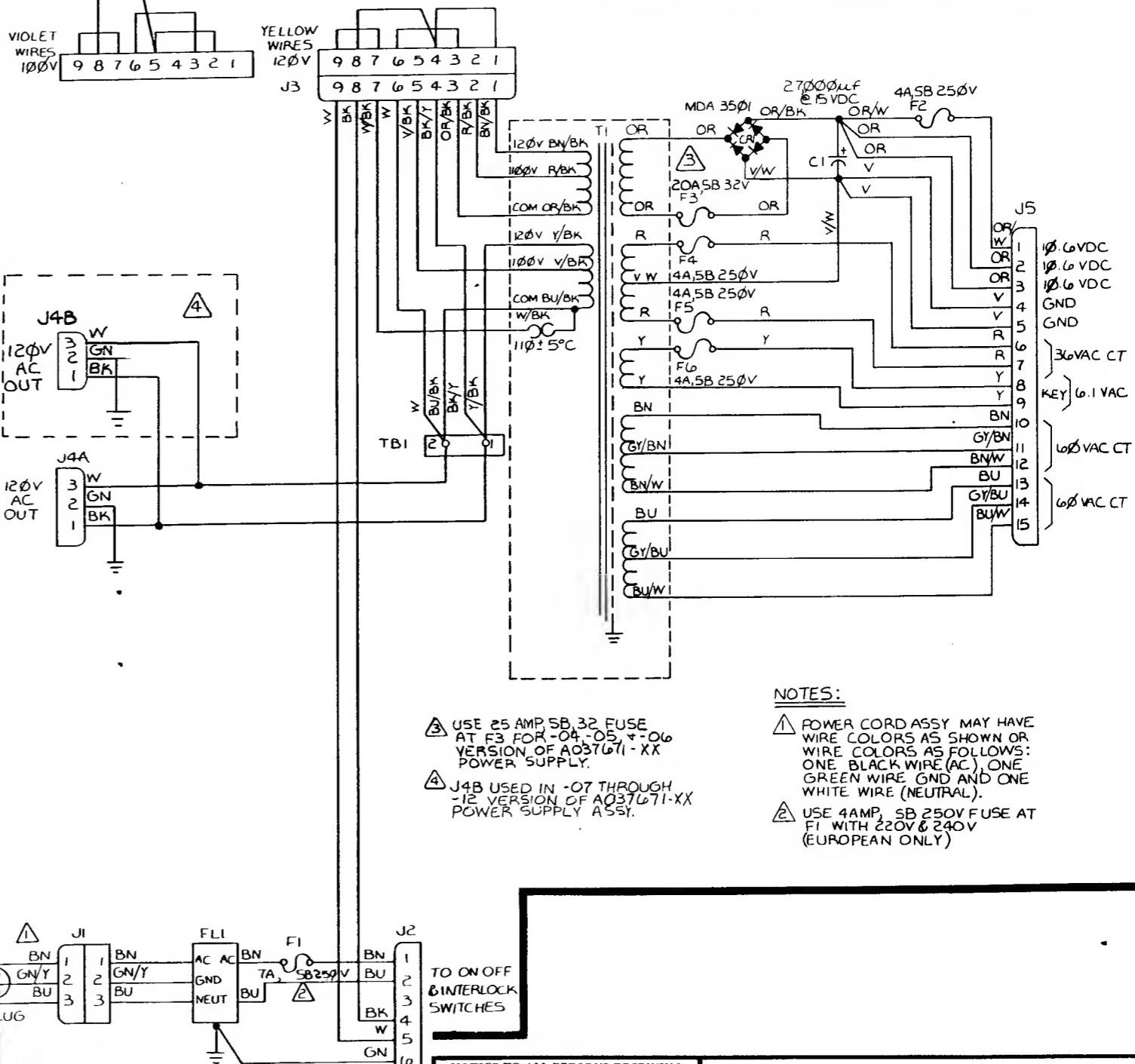


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Regulator/Audio II PCB Schematic Diagram



Color Raster Power Supply Wiring Diagram



NOTES:

③ USE 25 AMP SB 32 FUSE AT F3 FOR -04, -05, & -06 VERSION OF A037671-XX POWER SUPPLY.

④ J4 USED IN -07 THROUGH -12 VERSION OF A037671-XX POWER SUPPLY ASSY.

⚠ POWER CORD ASSY MAY HAVE WIRE COLORS AS SHOWN OR WIRE COLORS AS SHOWN: ONE BLACK WIRE (AC), ONE GREEN WIRE GND AND ONE WHITE WIRE (NEUTRAL).

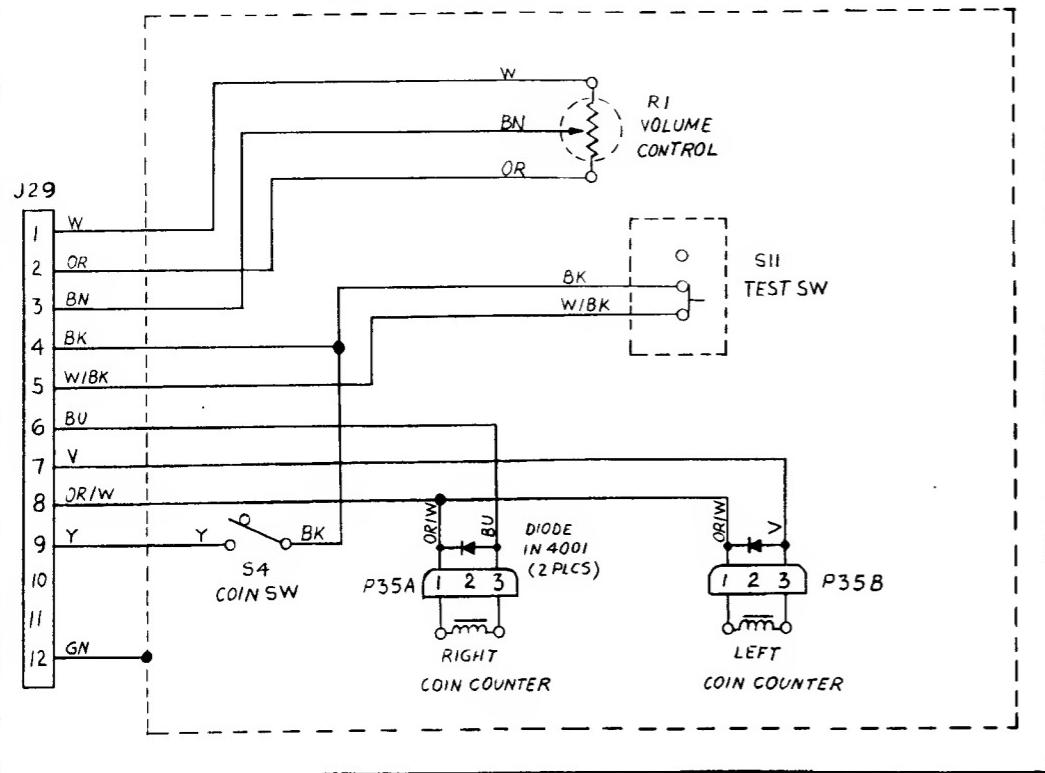
⚠ USE 4AMP SB 250V FUSE AT F1 WITH 220V & 240V (EUROPEAN ONLY)

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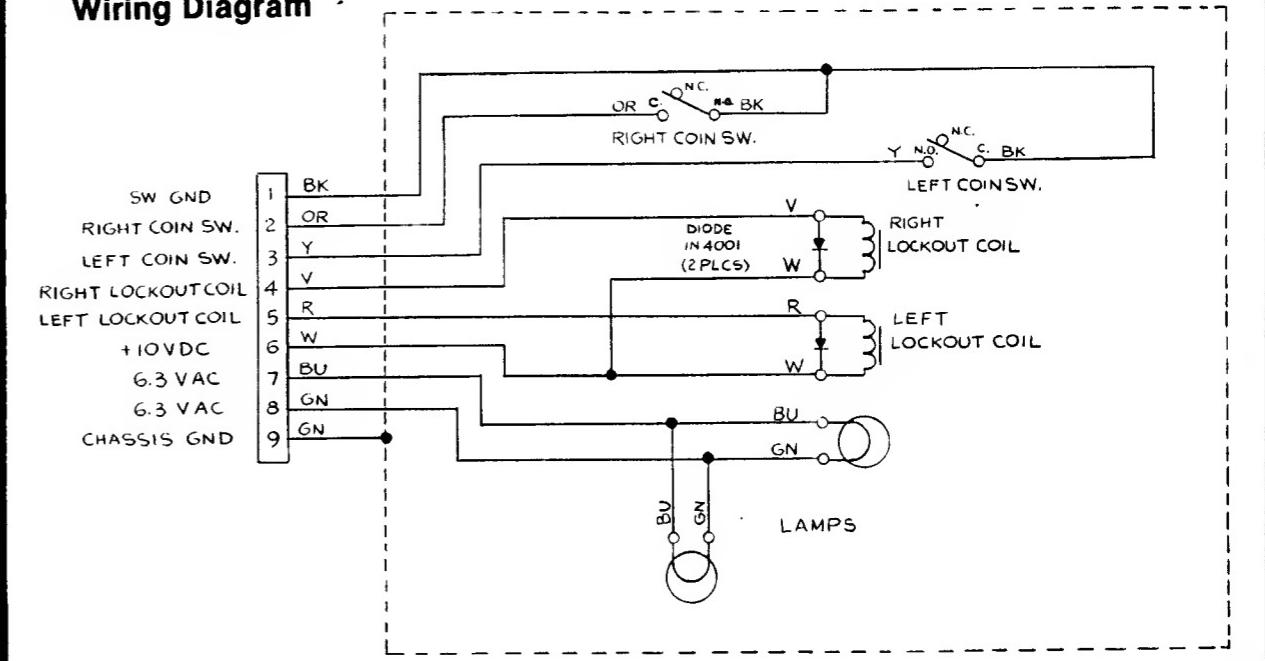
Arabian Regulator/Audio II PCB
and Power Supply Diagrams



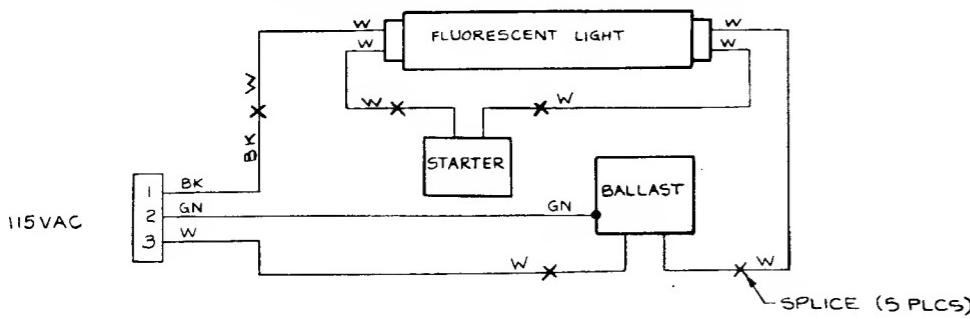
Utility Panel Wiring Diagram



**Coin Door
Wiring Diagram**



Fluorescent Light Wiring Diagram



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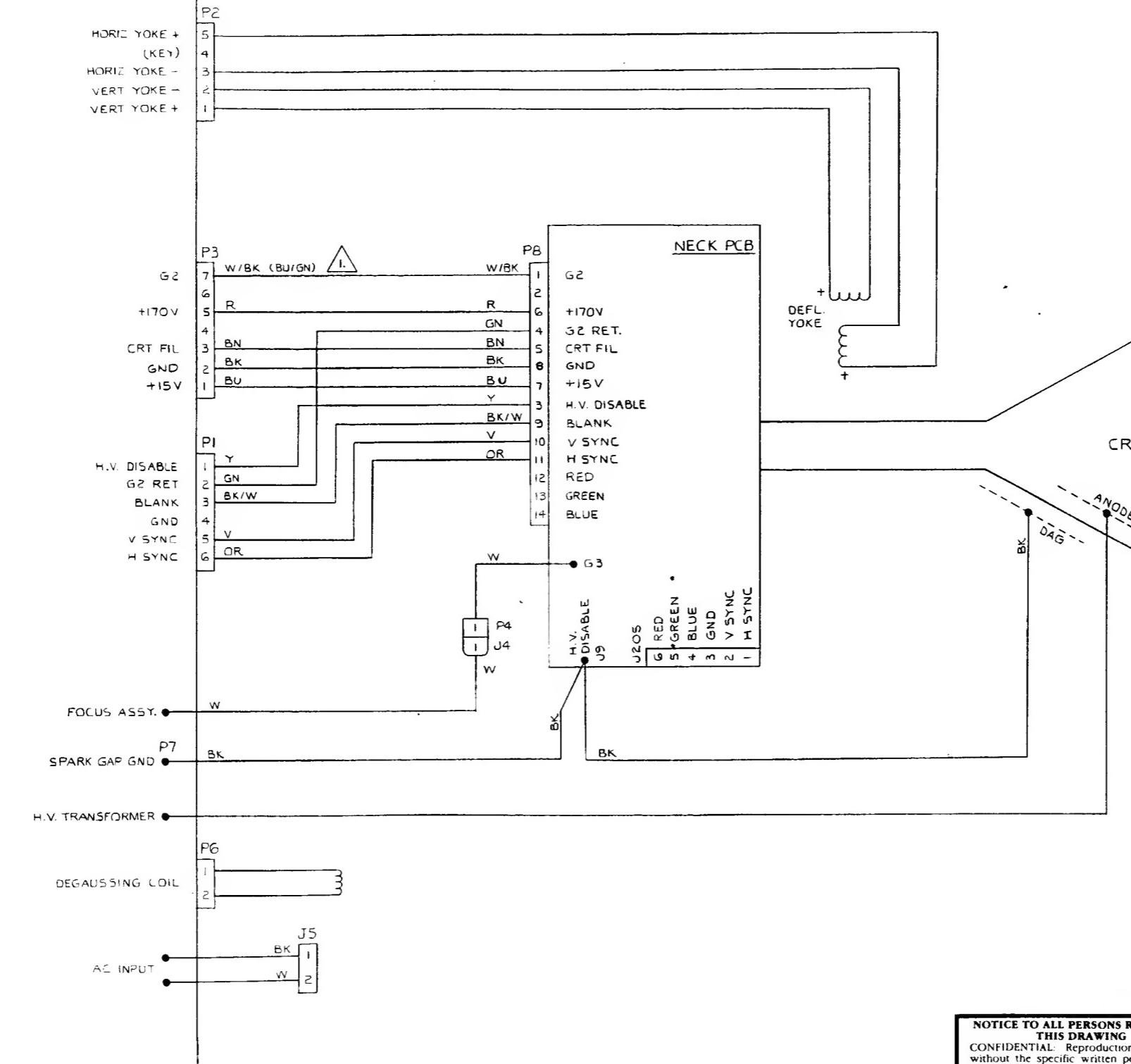
Arabian Game Interfaces



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DEFLECTION PCB



NOTE:

I. ALTERNATE COLOR IN PARENTHESES ().

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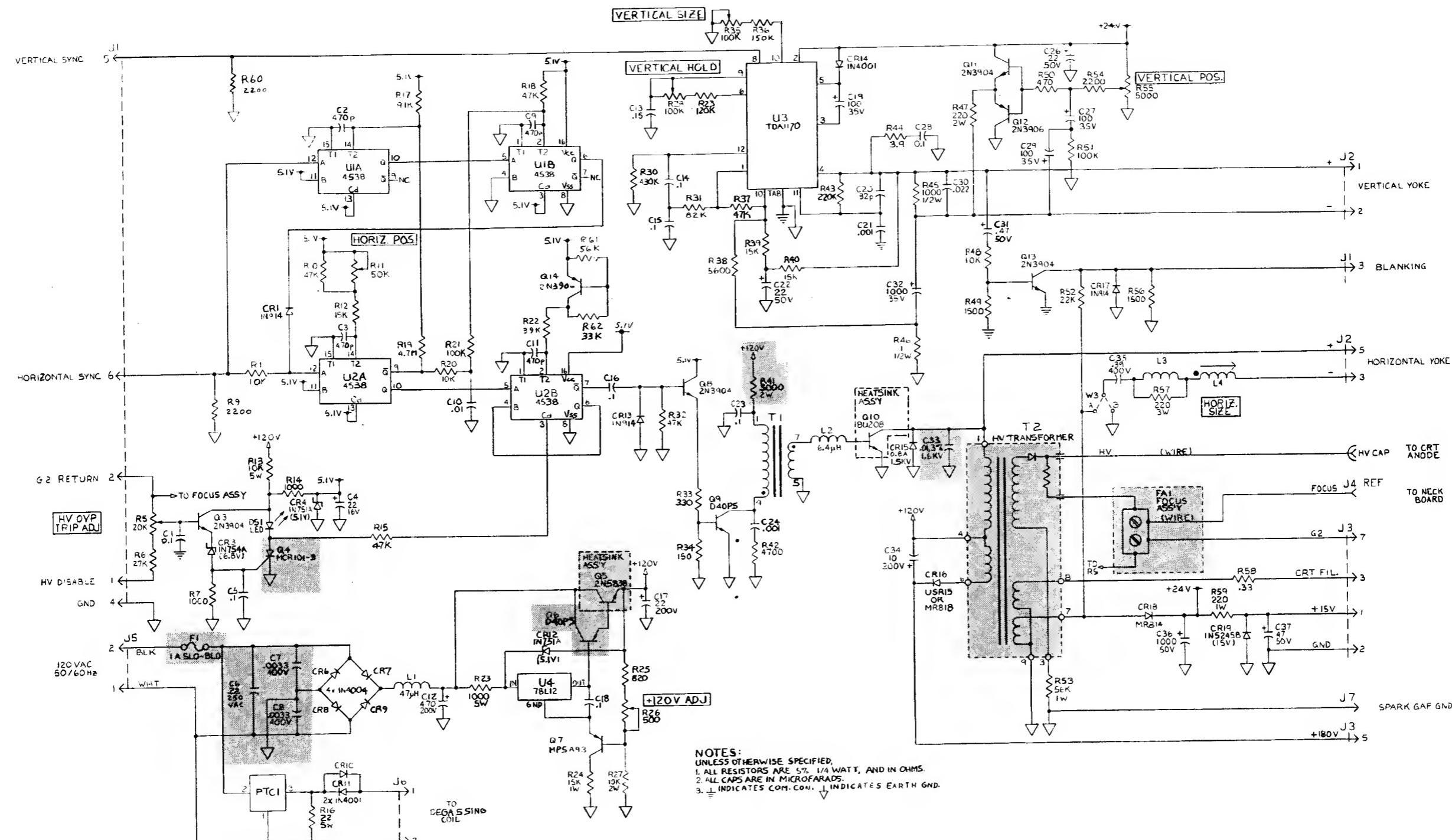
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Atari Color Raster Display Wiring Diagram



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PRODUCT SAFETY NOTICE

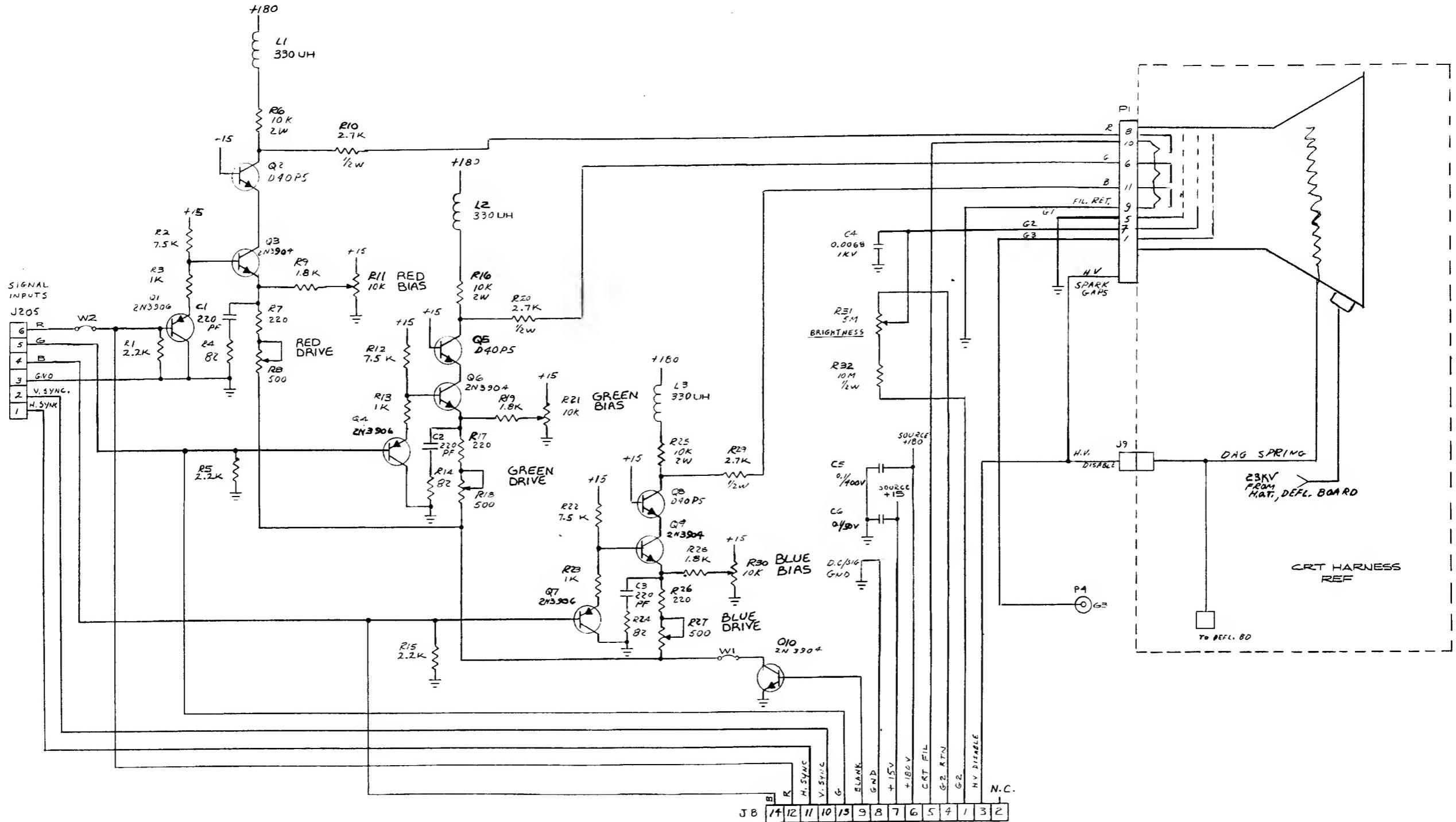
The shaded areas of this schematic indicate components whose values are of special significance to product safety. Should any component in the shaded areas need to be replaced, use only the value given in the parts lists. Do not deviate from the resistance, wattage, and voltage values shown.

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Atari Color Raster Display Deflection PCB Schematic Diagram



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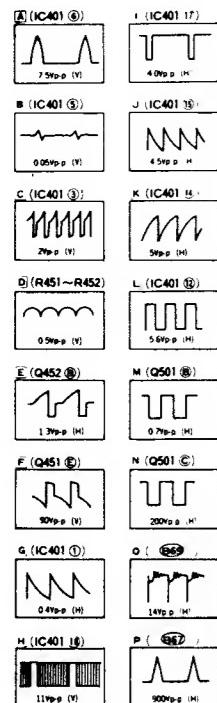
Atari Color Raster Display Neck PCB Schematic Diagram



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Waveform



NOTE

1 RESISTOR
All resistors are carbon 1/4W resistor, unless otherwise noted the following
Unit of measurement is OHM (10) $\times 1,000 = 10,000 \Omega$, or 10,000 MOH

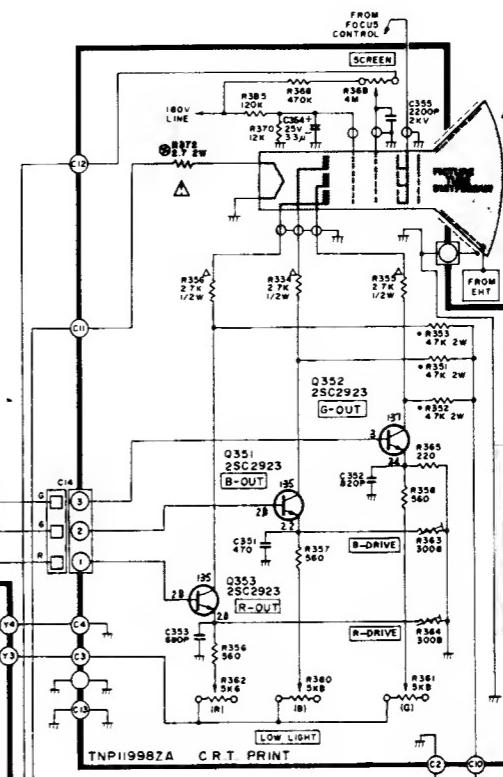
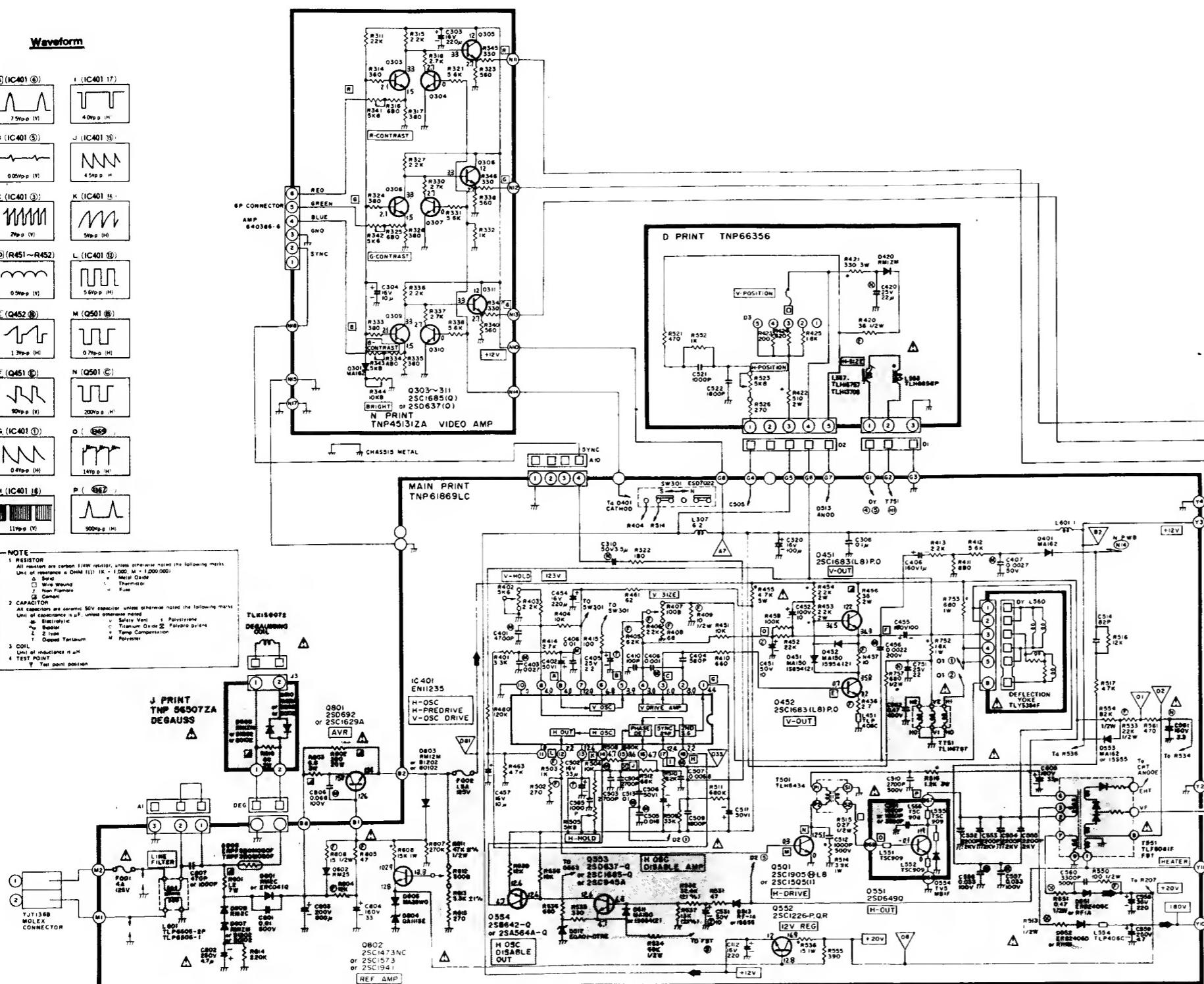
- Solid
- Wire Wound
- Carbon Film
- Resist

2 CAPACITOR
All capacitors are ceramic 50V discular unless otherwise noted the follow
Unit of measurement is μF , unless otherwise noted

- Electrolytic
- Paper
- 2 Term
- Tantalum
- Polyester
- Polycarbonate
- Temp Compensation
- Polyester

3 COIL
Unit of measurement is mH

4 TEST POINT
T Test point position



—WARNING—

Components identified by shading have special characteristics important to safety and must be replaced only with identical parts.

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Matsushita Color Raster Display Schematic Diagram



Arabian Memory Map

HEXA-DECIMAL ADDRESS	ADDRESS BUS SIGNAL LINES												READ/WRITE	DATA BUS SIGNAL LINES						FUNCTION					
	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1	A0	D7	D6	D5	D4	D3	D2	D1	D0	
E006	1	1	1	0	A	A	A	A	A	A	A	A	A	1	1	0	W	D	D	D	D	D	D	D	XY(H)] Picture Size and XY(L)] DMA Start
E005	1	1	1	0	A	A	A	A	A	A	A	A	A	1	0	1	W	D	D	D	D	D	D	D	
E004	1	1	1	0	A	A	A	A	A	A	A	A	A	1	0	0	W	D	D	D	D	D	D	D	WR(H)] DMA RAM WR(L)] Start Address
E003	1	1	1	0	A	A	A	A	A	A	A	A	A	0	1	1	W	D	D	D	D	D	D	D	
E002	1	1	1	0	A	A	A	A	A	A	A	A	A	0	1	0	W	D	D	D	D	D	D	D	RD(H)] DMA ROM RD(L)] Start Address
E001	1	1	1	0	A	A	A	A	A	A	A	A	A	0	0	1	W	D	D	D	D	D	D	D	
E000	1	1	1	0	A	A	A	A	A	A	A	A	A	0	0	0	W		D	D	D	D	D	D	BSEL Bank Select
DFFF-D000	1	1	0	1	A	A	A	A	A	A	A	A	A	A	A	A	R/W	D	D	D	D	D	D	D	Custom Microprocessor RAM
CA00	1	1	0	0	1	0	1	0	A	A	A	A	A	A	A	A	R/W	D	D	D	D	D	D	D	Sound Chip Data
C800	1	1	0	0	1	0	0	0	A	A	A	A	A	A	A	A	W	D	D	D	D	D	D	D	Sound Chip Address
C200	1	1	0	0	0	0	1	0	A	A	A	A	A	A	A	A	R		D	D	D	D	D	D	Option Switches
C000	1	1	0	0	0	0	0	0	A	A	A	A	A	A	A	A	R		D	D	D	D	D	D	Coin Inputs
BFFF-8000	1	0	1	1	A	A	A	A	A	A	A	A	A	A	A	A	R/W	D	D	D	D	D	D	D	Bit Map RAM
6000-7FFF	0	1	1	A	A	A	A	A	A	A	A	A	A	A	A	A	R	D	D	D	D	D	D	D	ROM 3]
4000-5FFF	0	1	0	A	A	A	A	A	A	A	A	A	A	A	A	A	R	D	D	D	D	D	D	D	ROM 2]
2000-3FFF	0	0	1	A	A	A	A	A	A	A	A	A	A	A	A	A	R	D	D	D	D	D	D	D	ROM 1] Program ROM (Z-80)
0000-1FFF	0	0	0	A	A	A	A	A	A	A	A	A	A	A	A	A	R	D	D	D	D	D	D	D	ROM 0]

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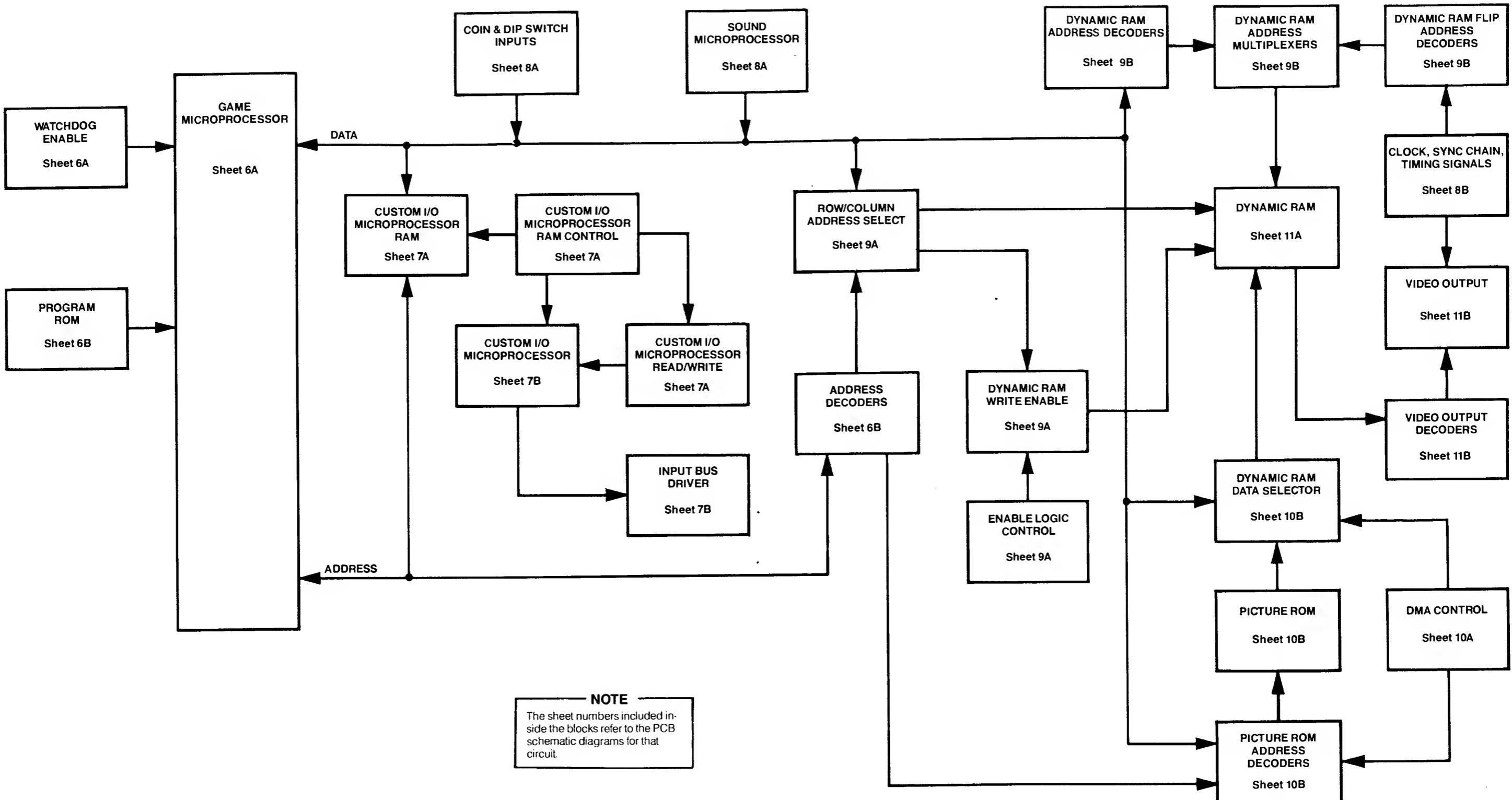
Arabian Memory Map



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WPS

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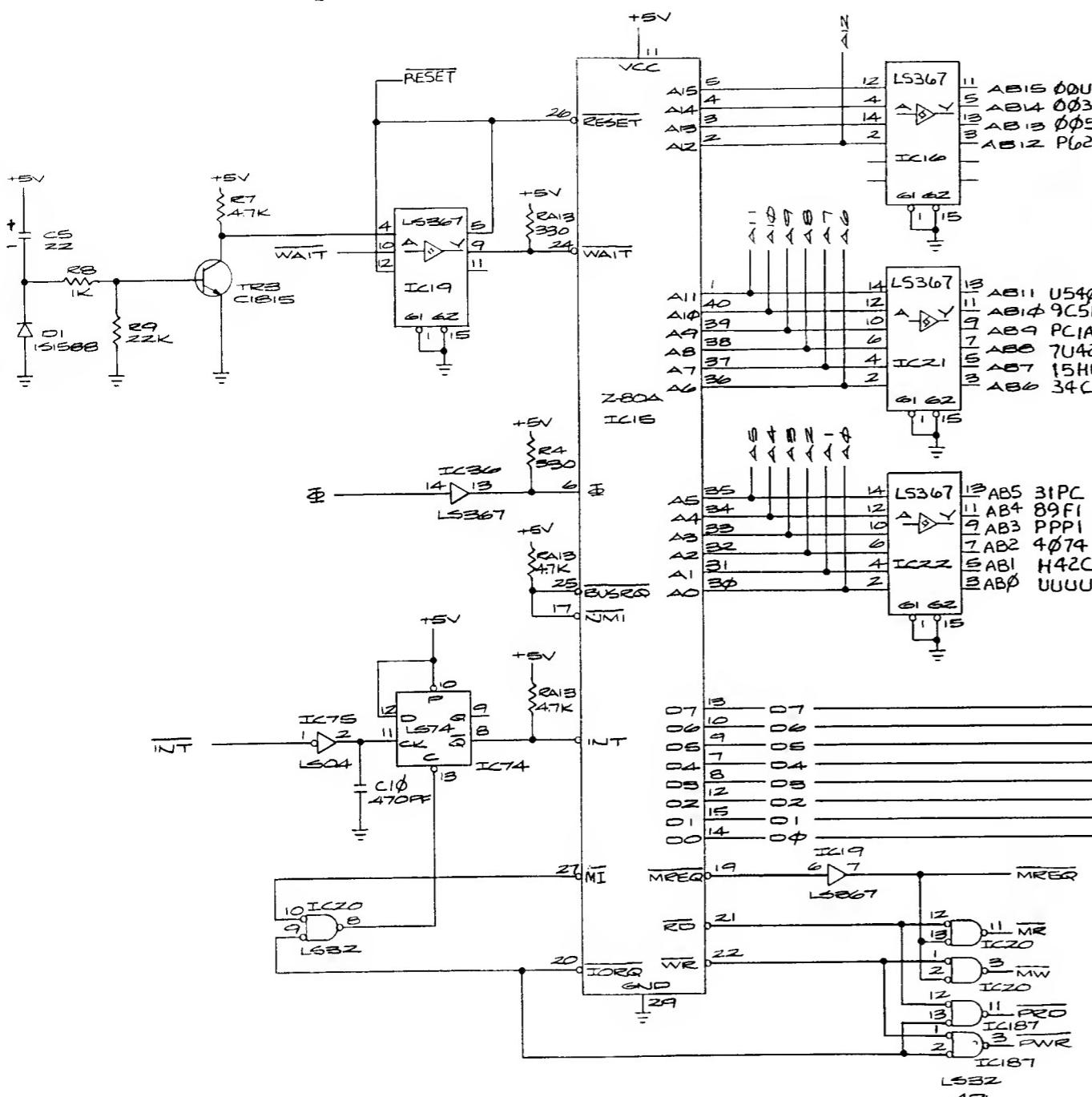


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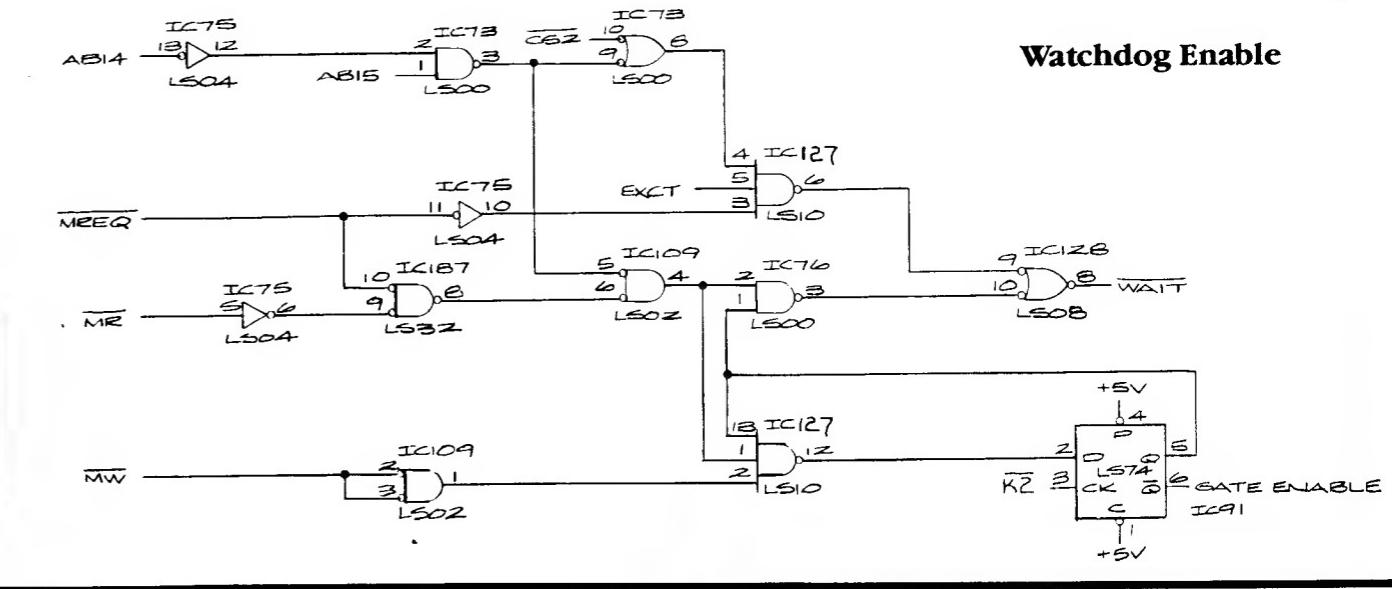
Arabian Block Diagram/Guide to PCB Schematics



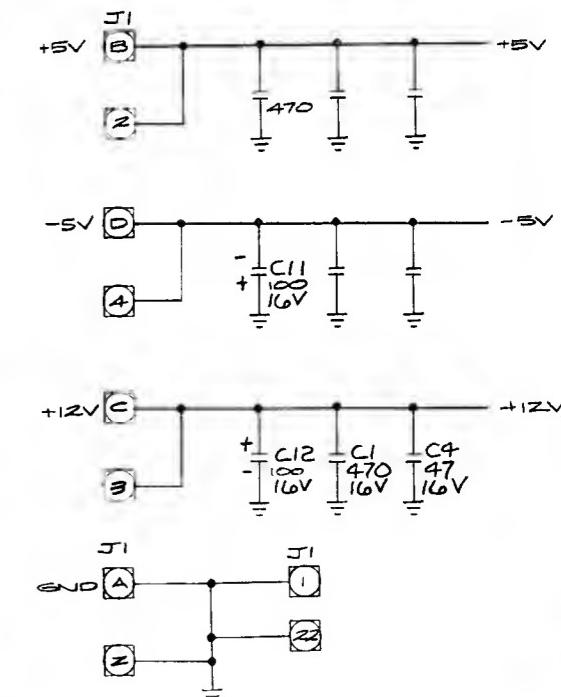
Game Microprocessor



Watchdog Enable



Game Power Input



NOTES:

- DENOTES J1 CONNECTOR
- DENOTES J2 CONNECTOR

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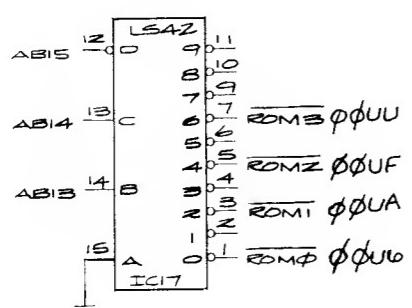
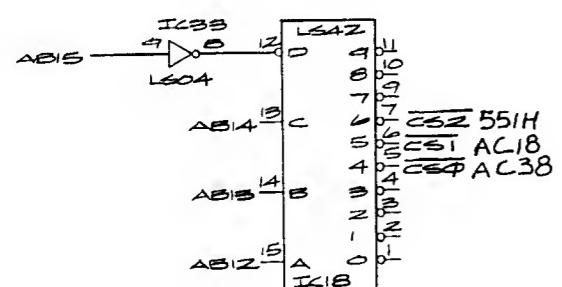
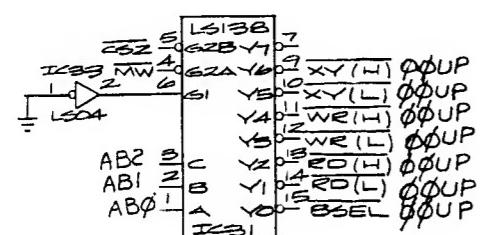
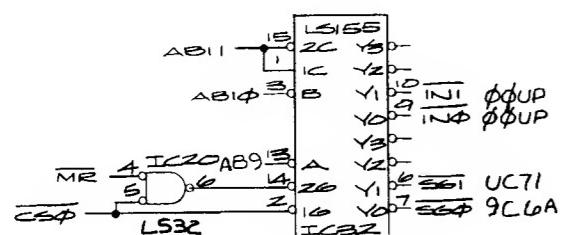
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Arabian PCB Schematic Diagram

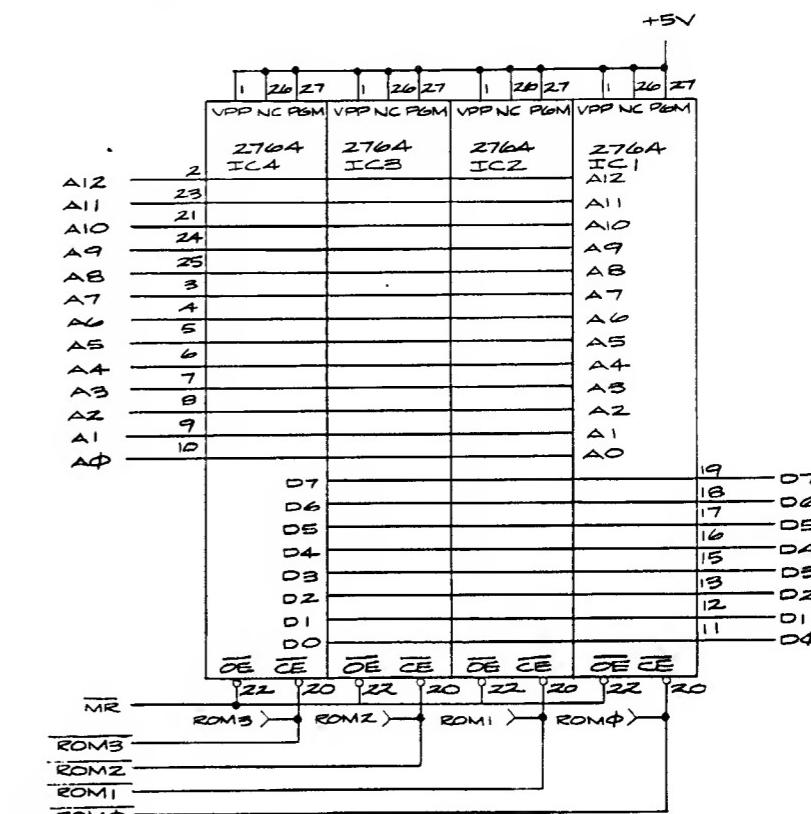


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Address Decoders



Program ROM



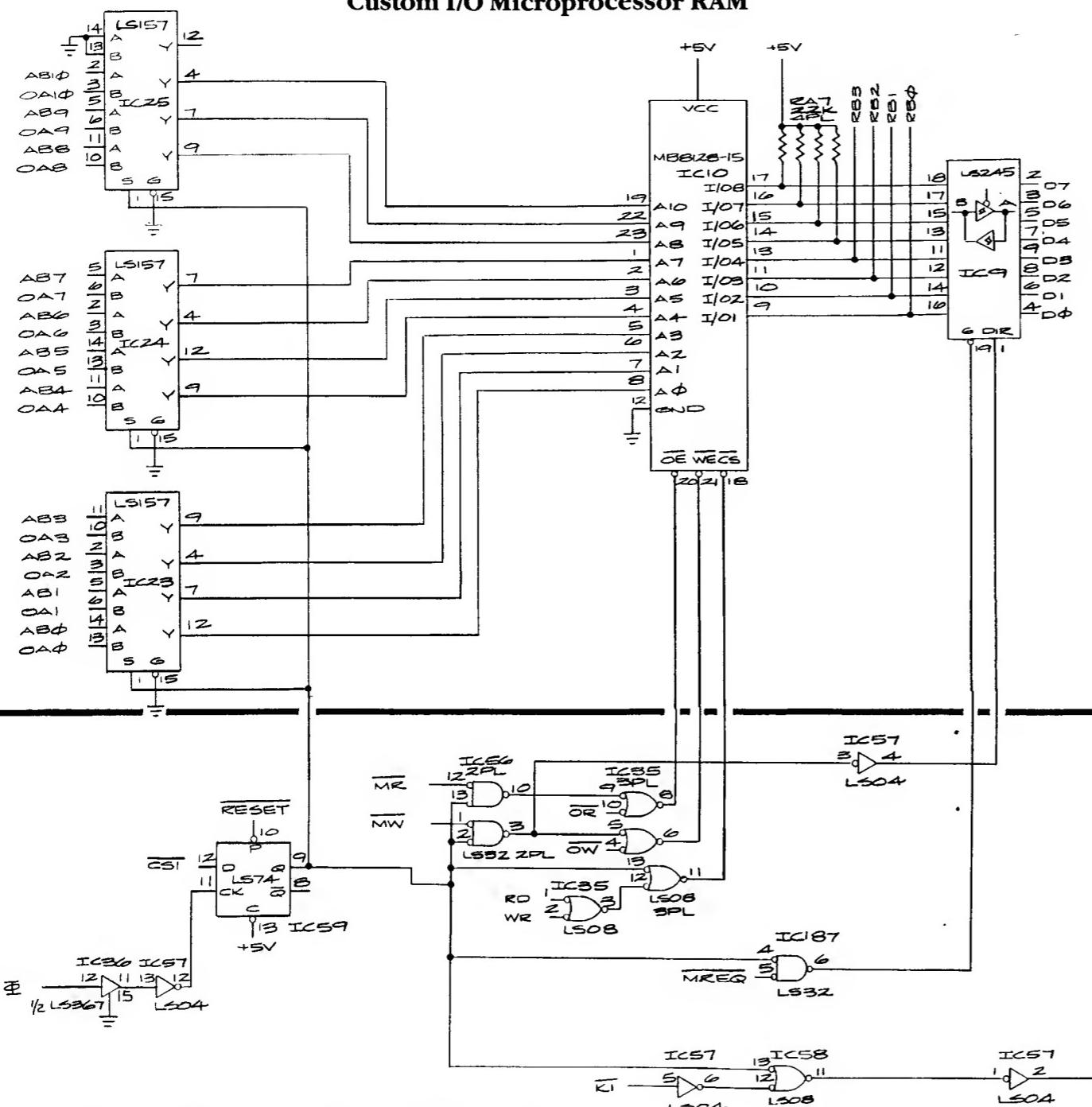
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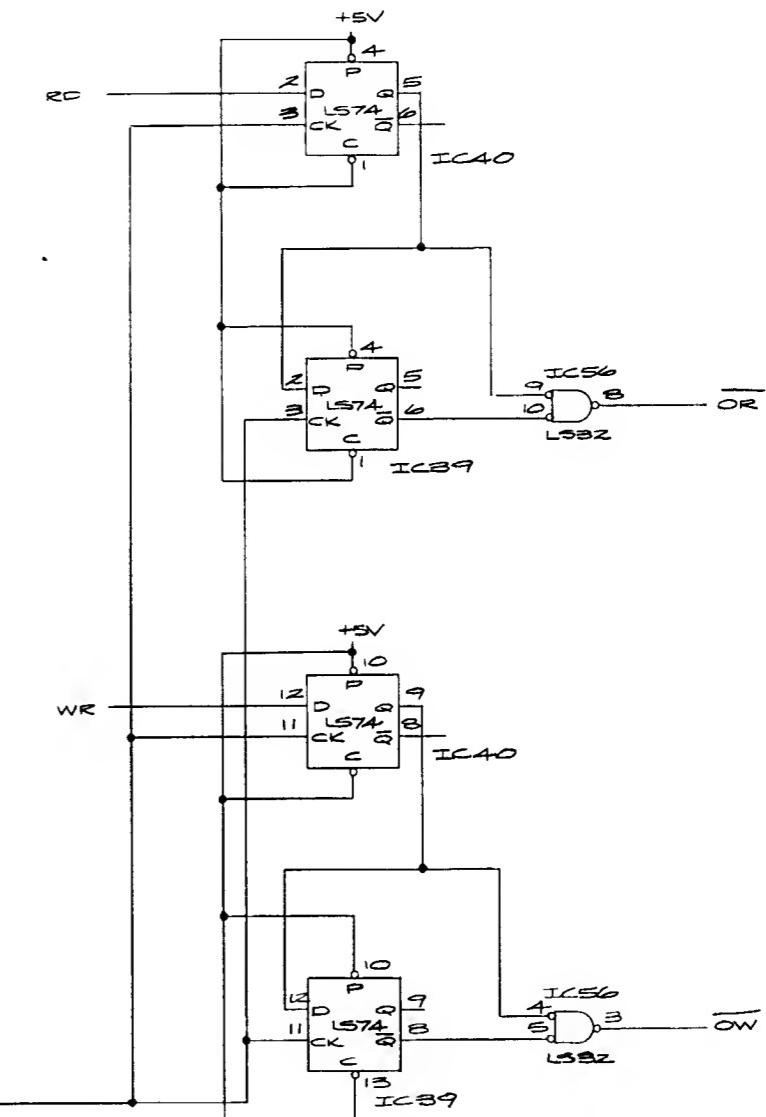
Arabian PCB Schematic Diagram



Custom I/O Microprocessor RAM



Custom I/O Microprocessor Read/Write



Custom I/O Microprocessor RAM Control

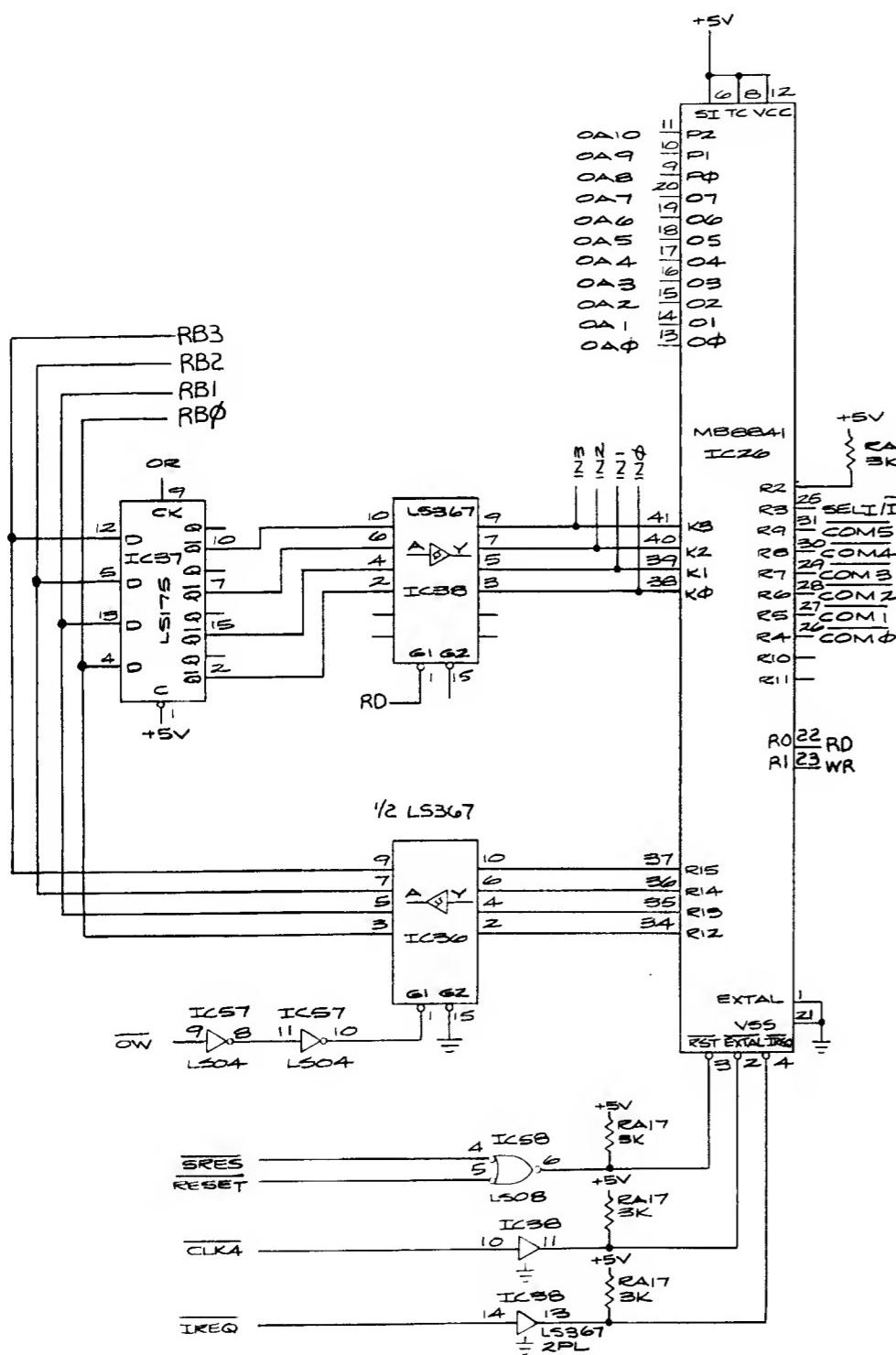
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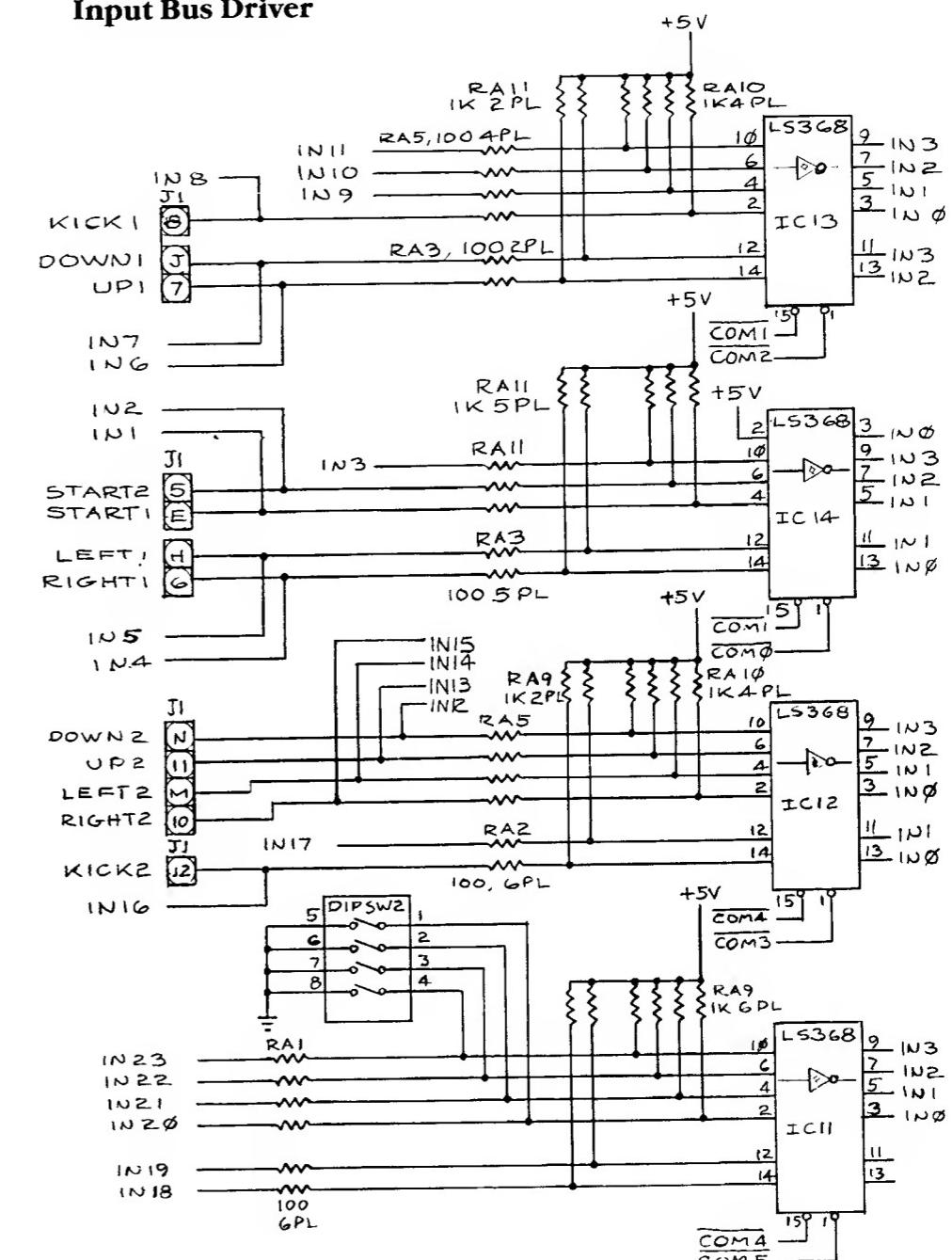
Arabian PCB Schematic Diagram



Custom I/O Microprocessor



Input Bus Driver



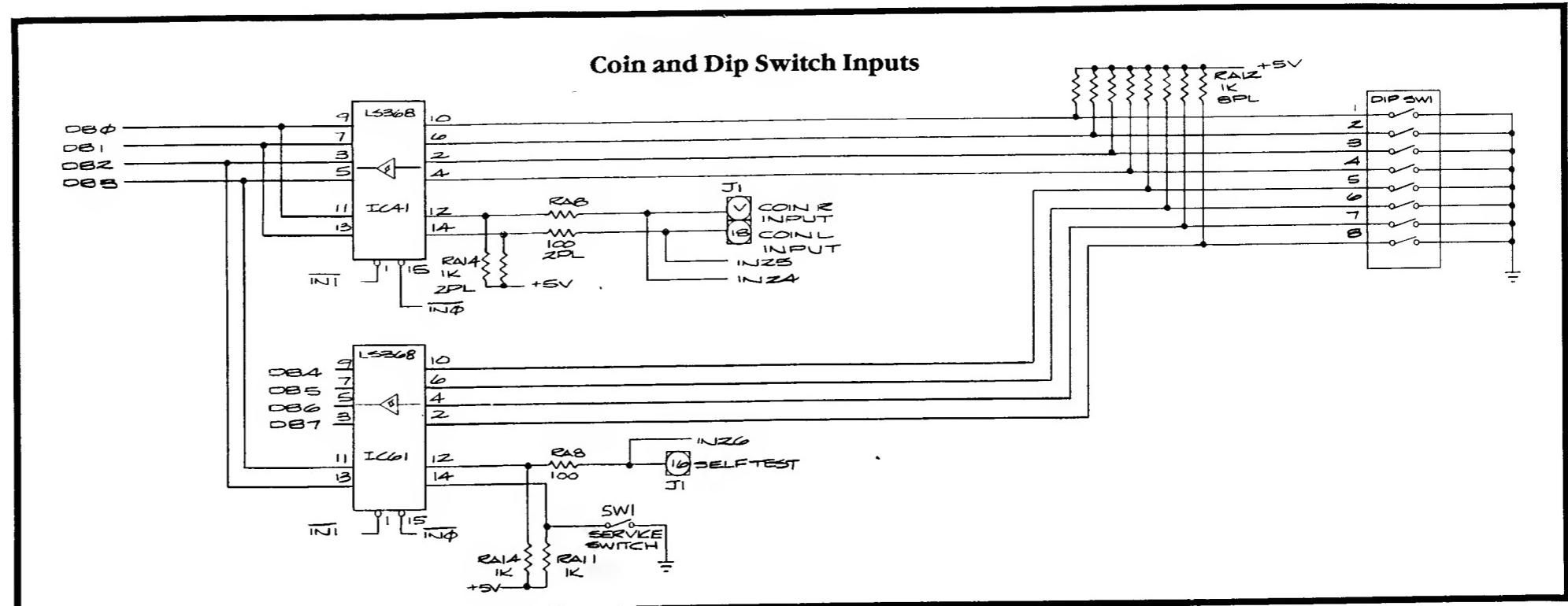
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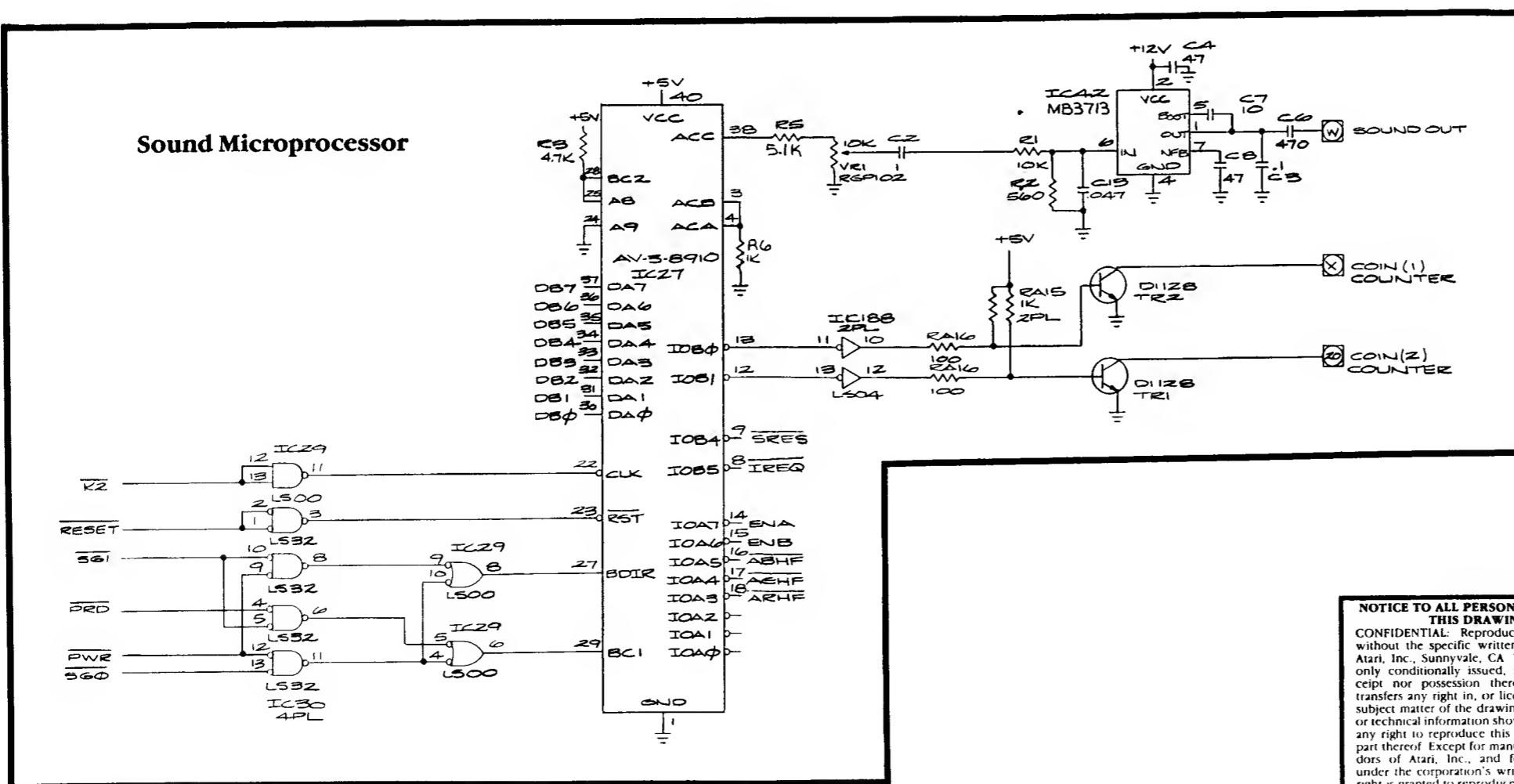
Arabian PCB Schematic Diagram



Coin and Dip Switch Inputs



Sound Microprocessor



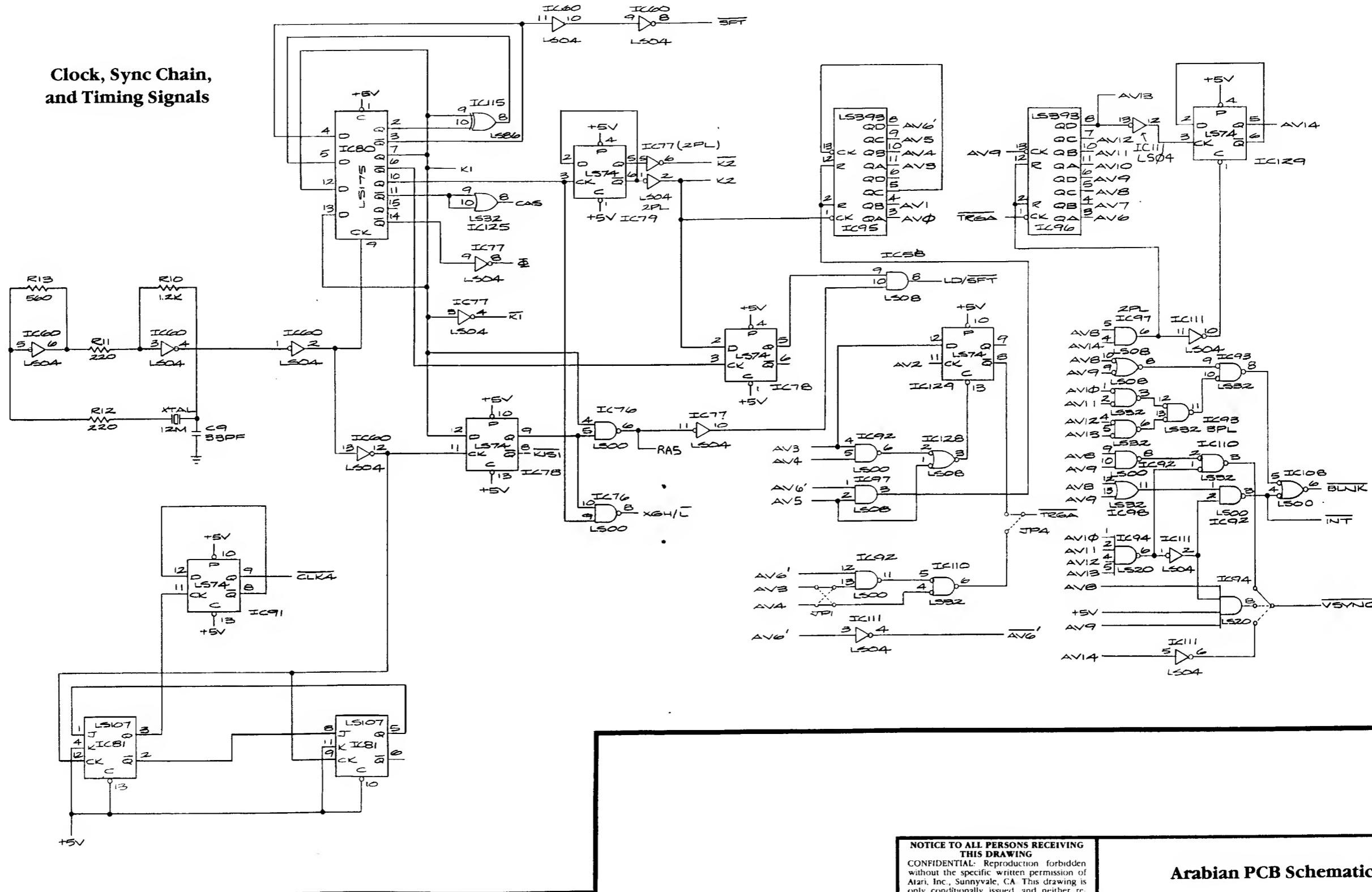
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Arabian PCB Schematic Diagram



Clock, Sync Chain, and Timing Signals



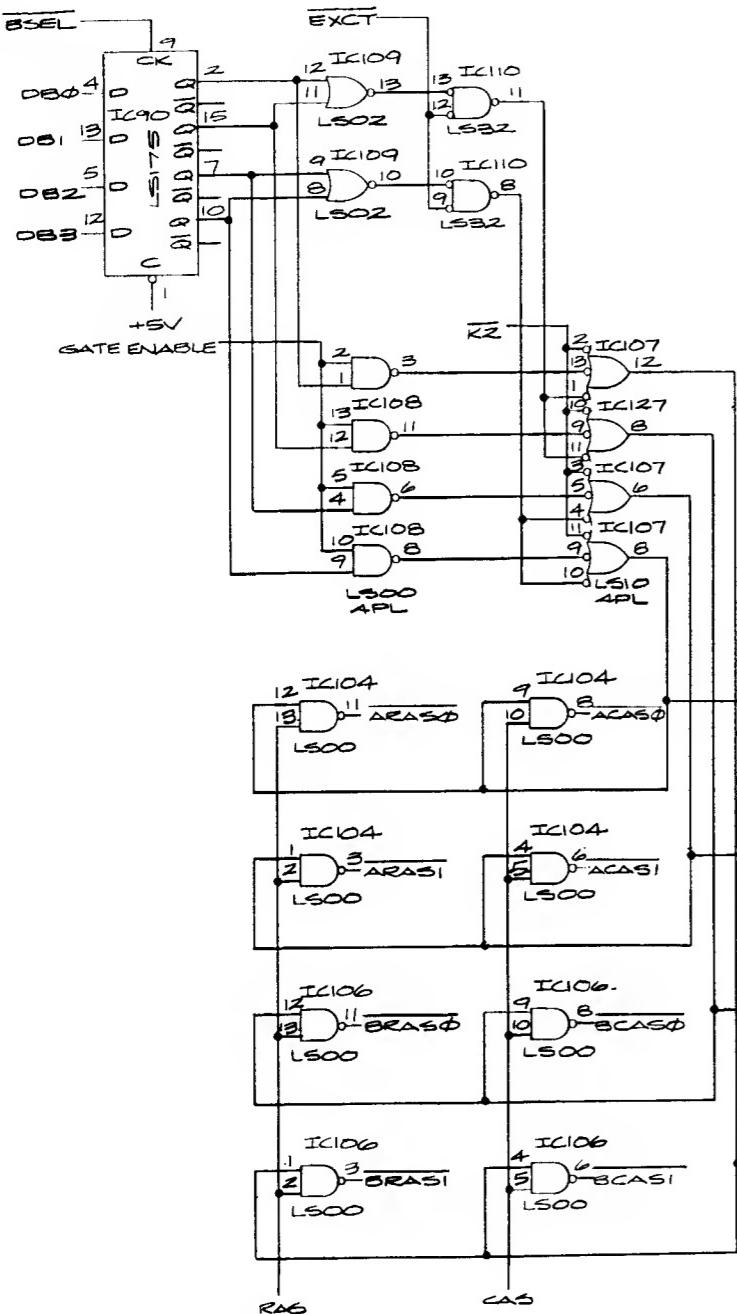
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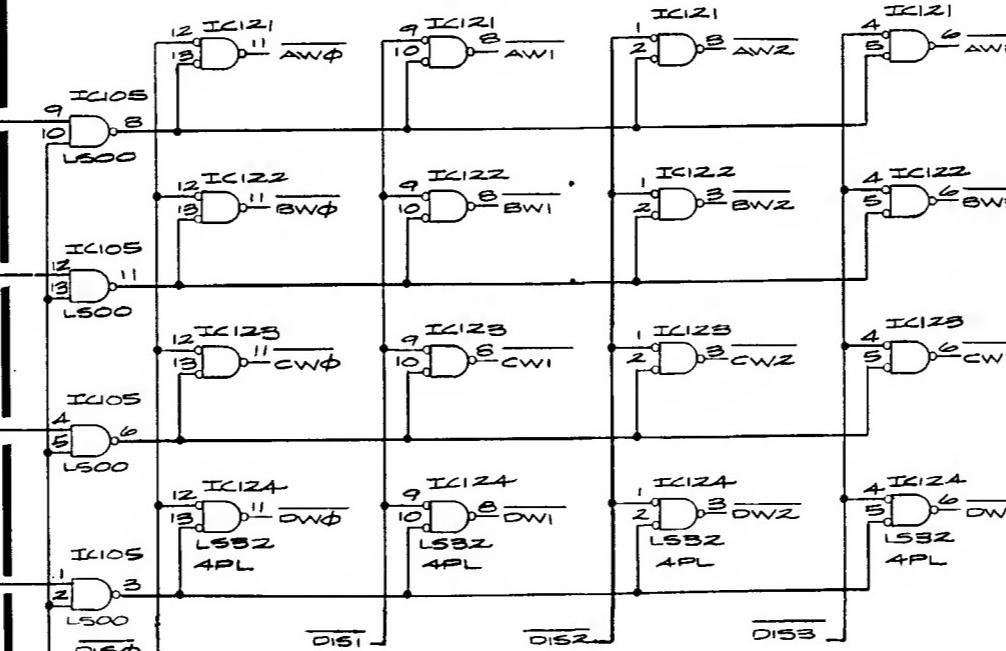
Arabian PCB Schematic Diagram



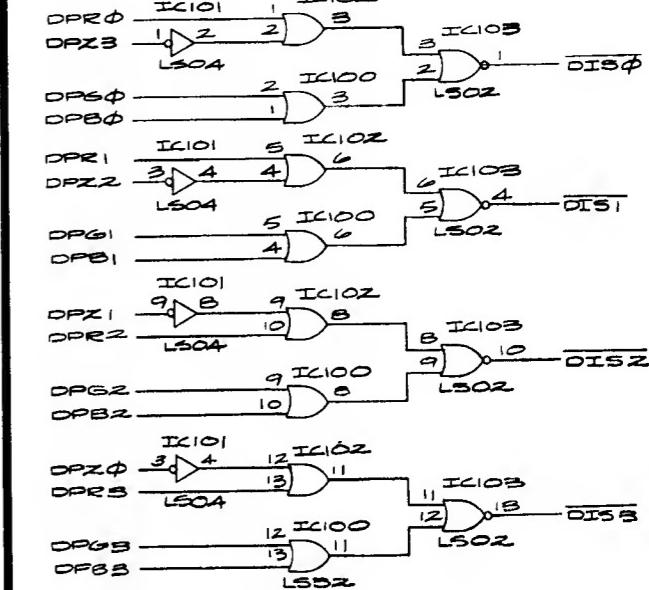
Row/Column Address Select



Dynamic RAM Write Enable



Enable Logic Control



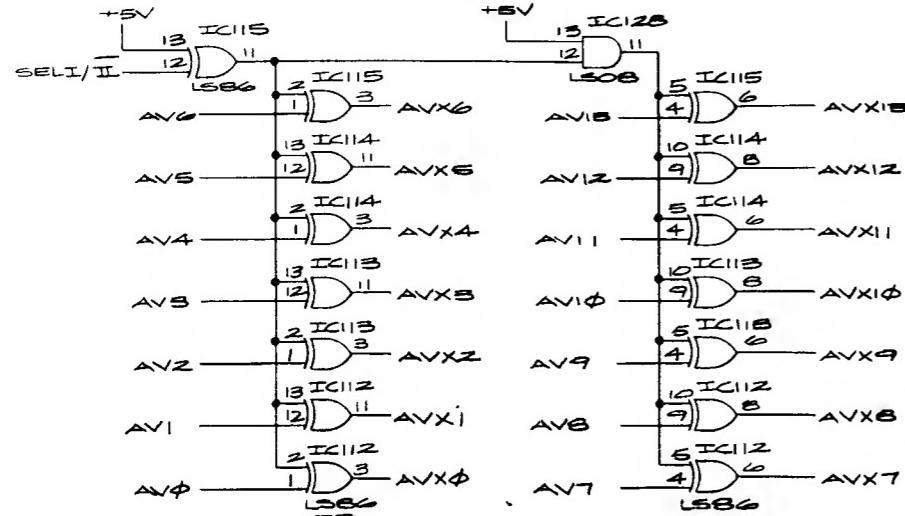
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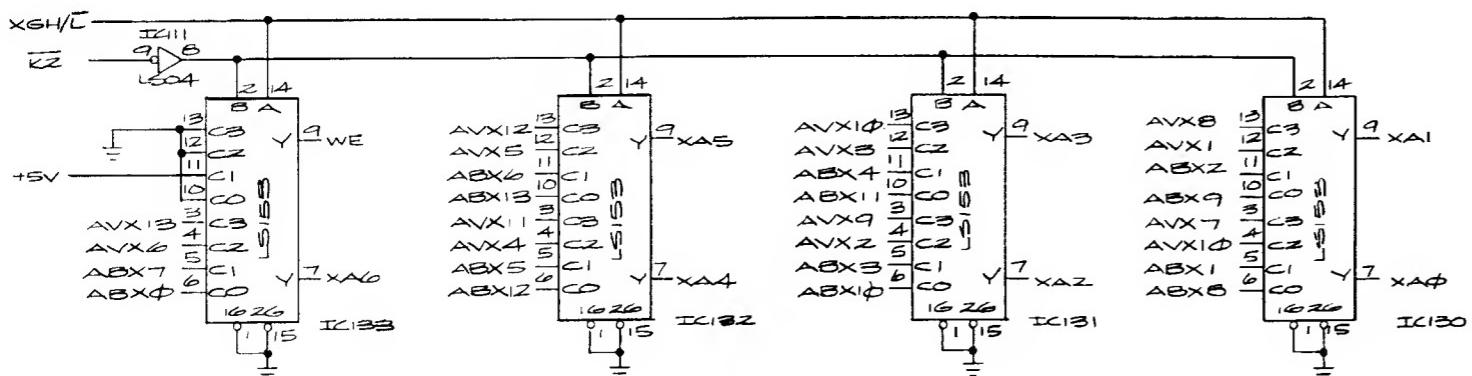
Arabian PCB Schematic Diagram



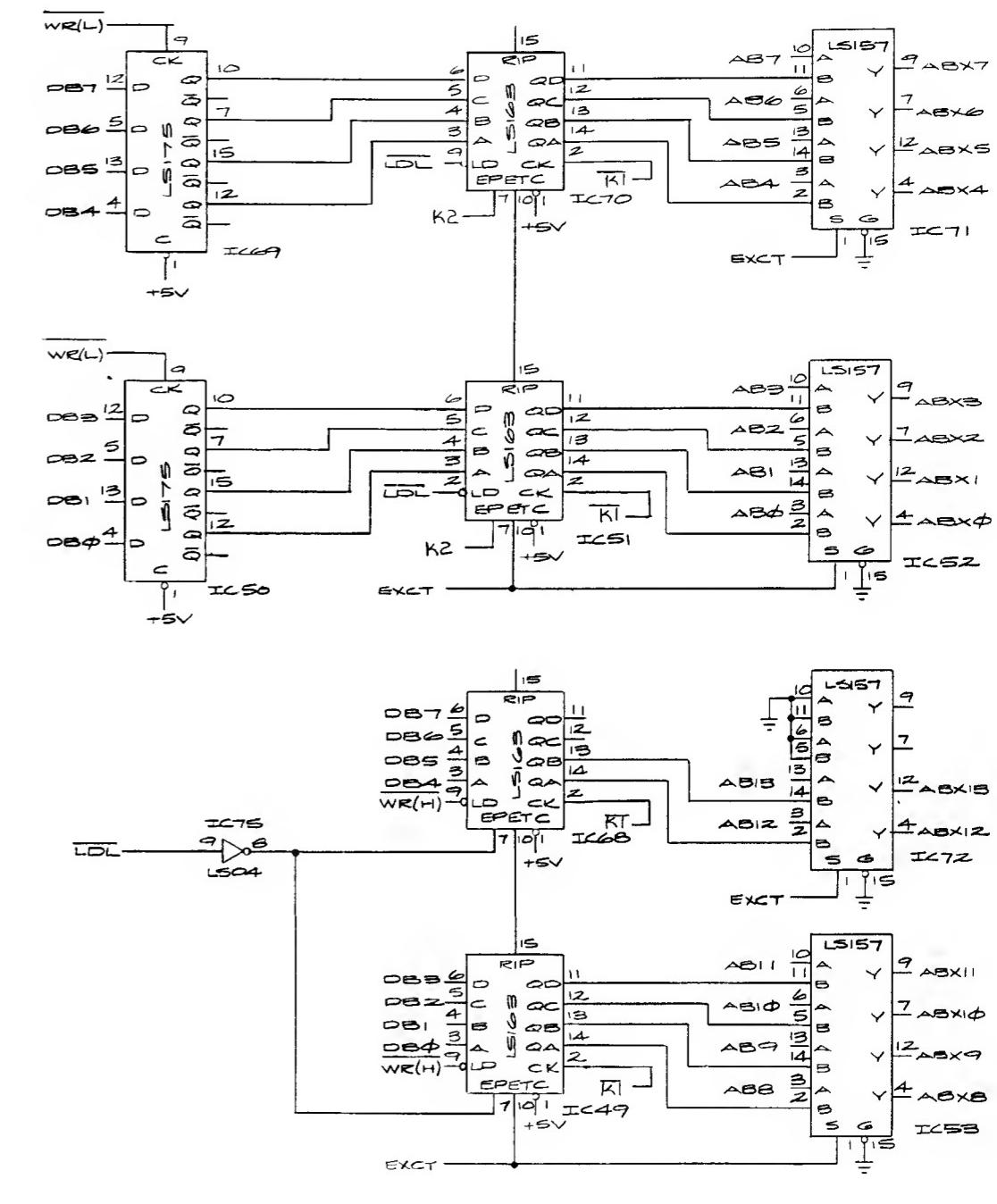
Dynamic RAM Flip Address Decoders



Dynamic RAM Address Multiplexers



Dynamic RAM Address Decoders



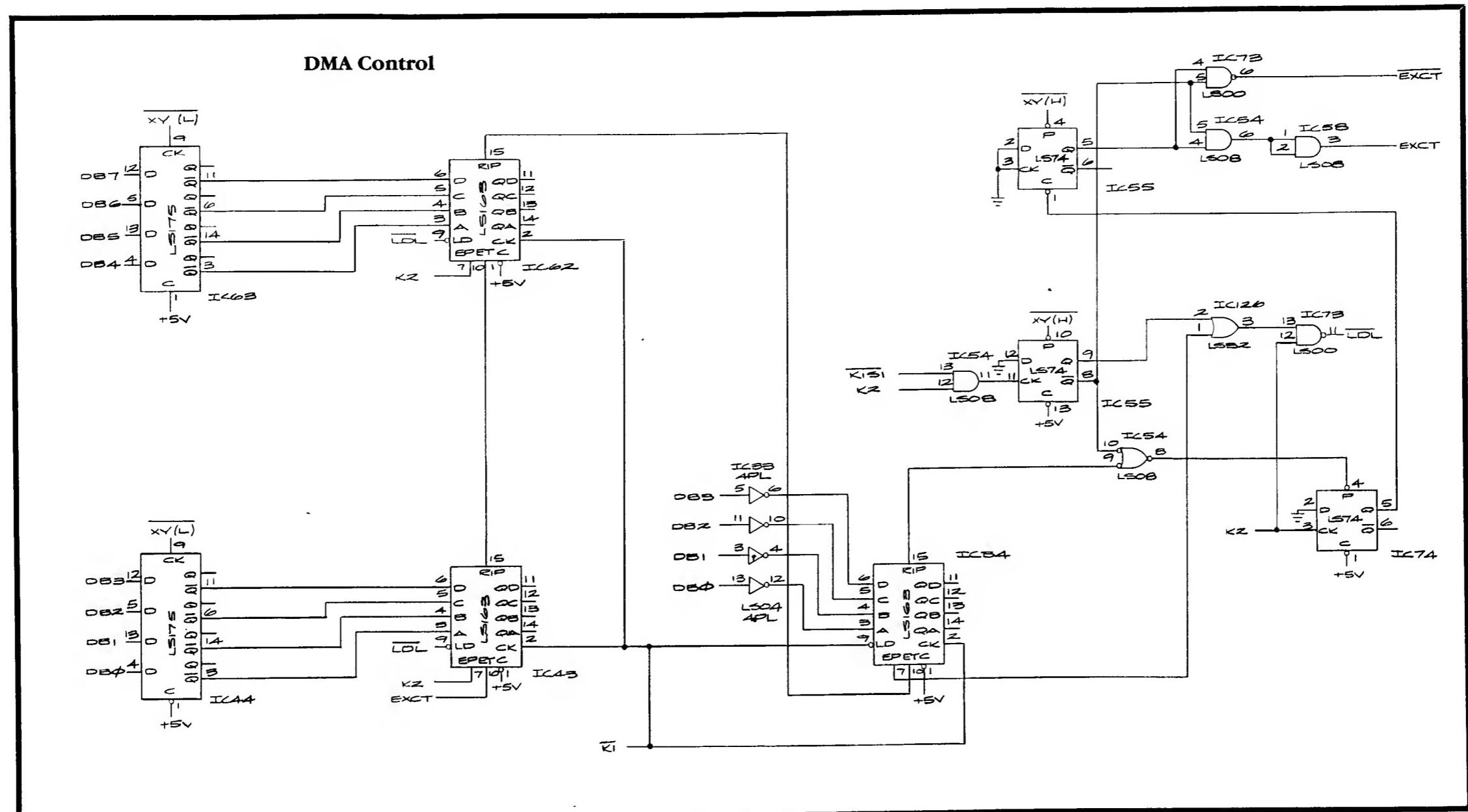
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Arabian PCB Schematic Diagram



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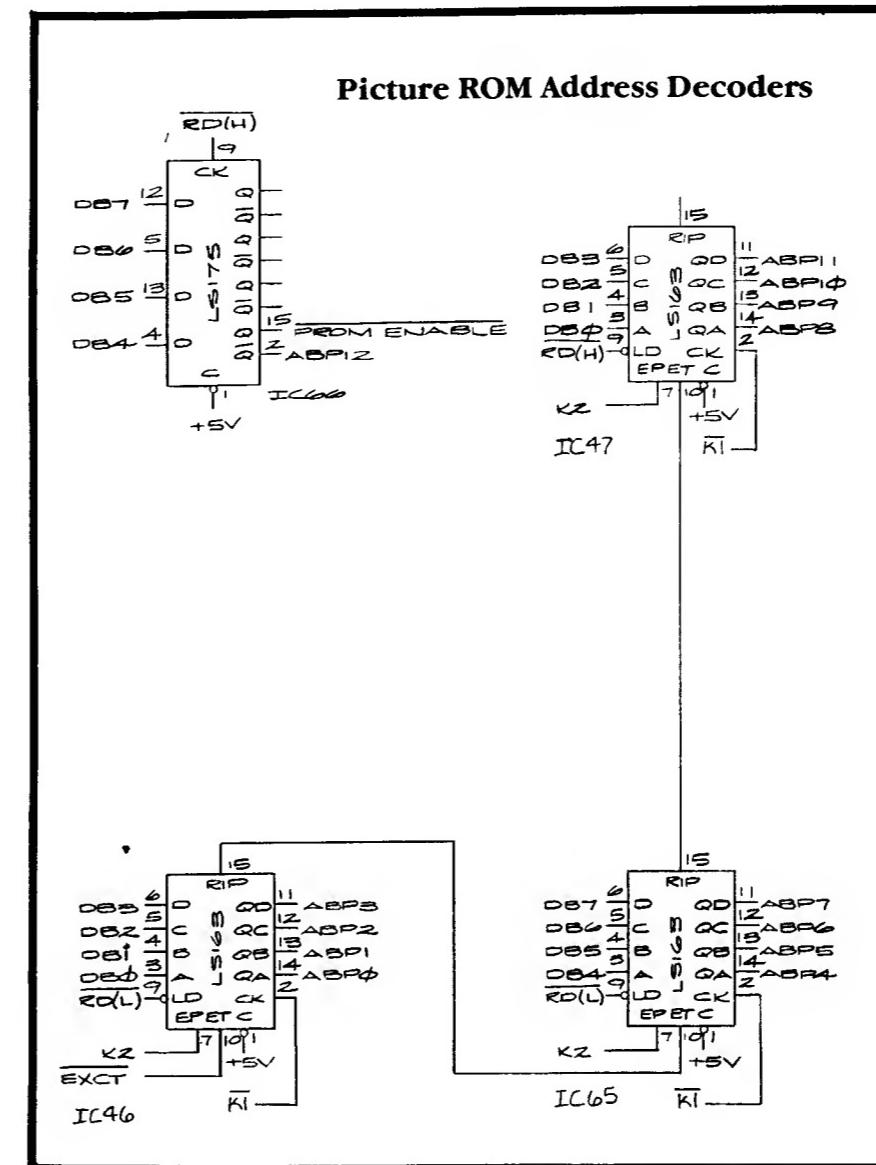
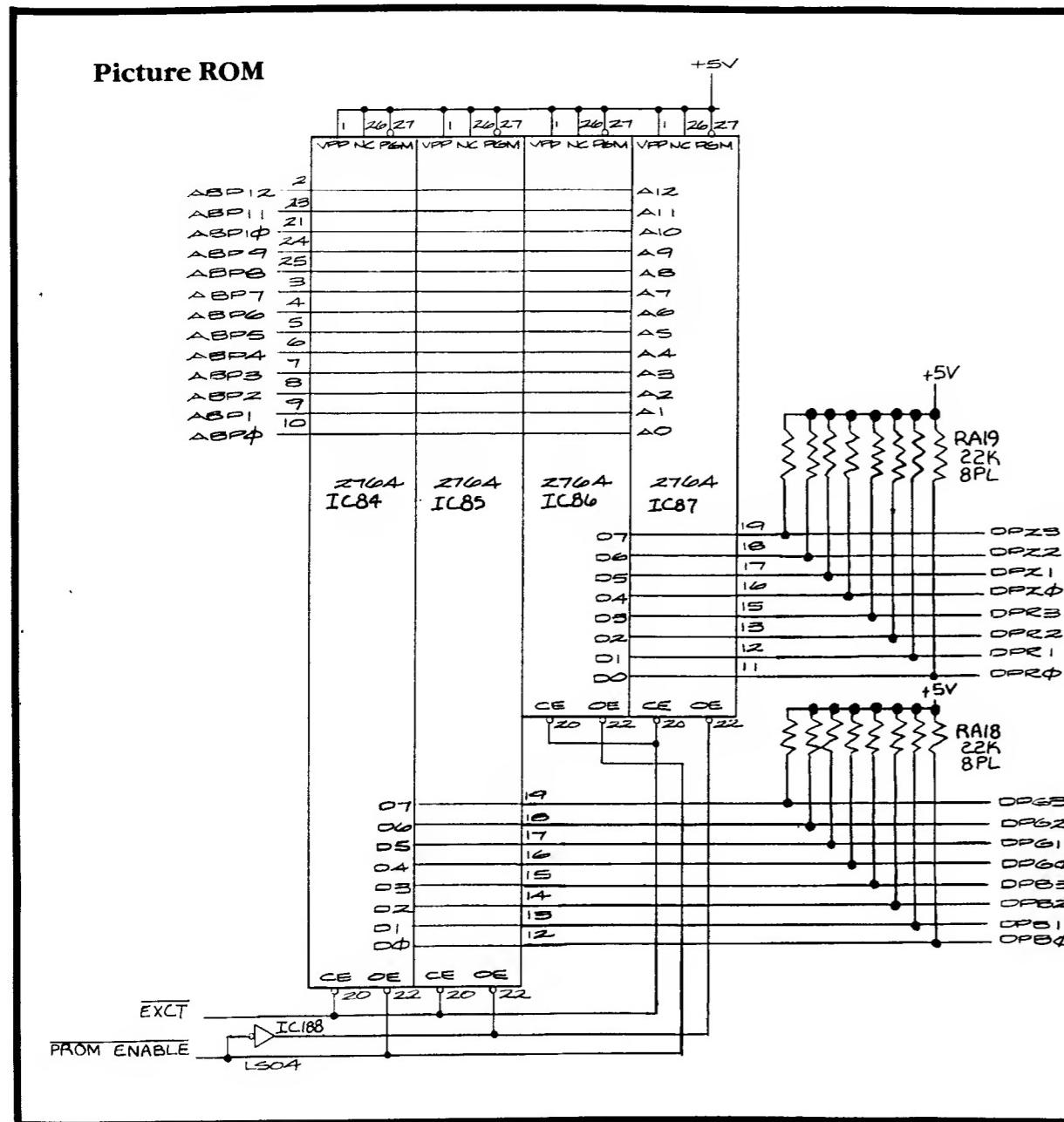
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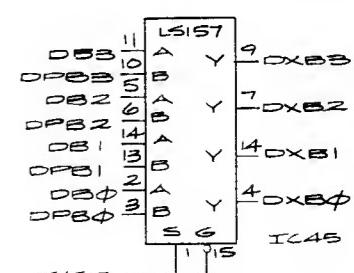
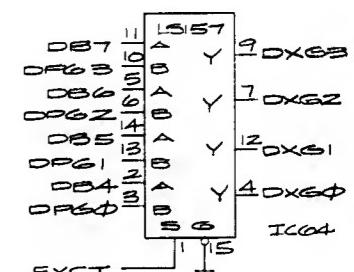
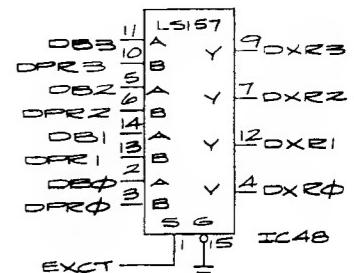
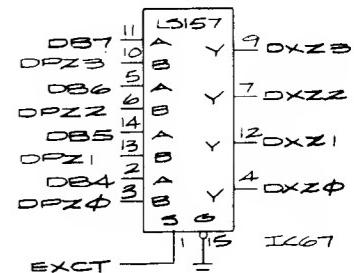


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SP-237 Sheet 10A
1st printing



Dynamic RAM Data Selector



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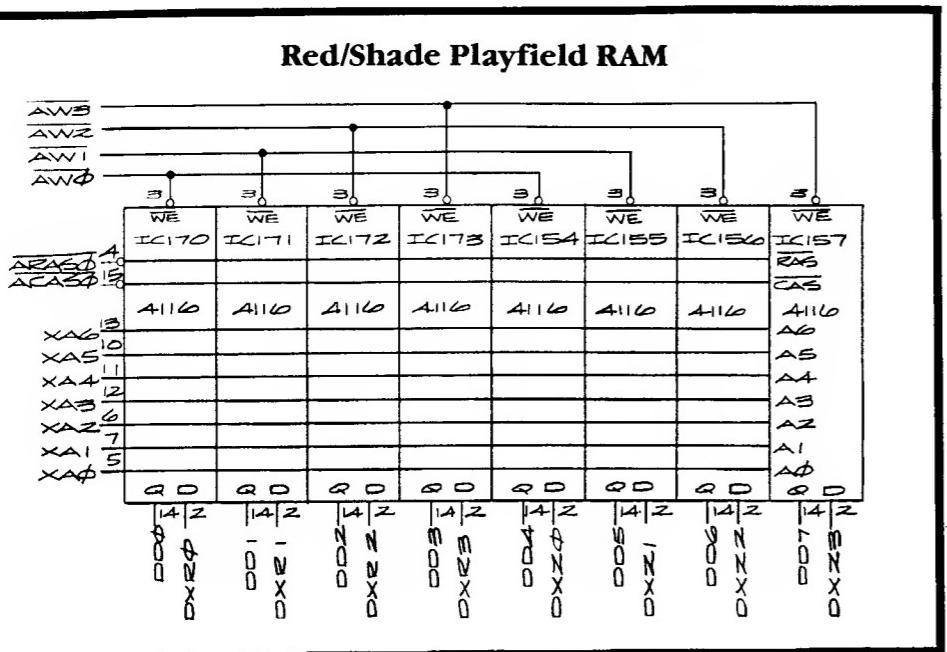
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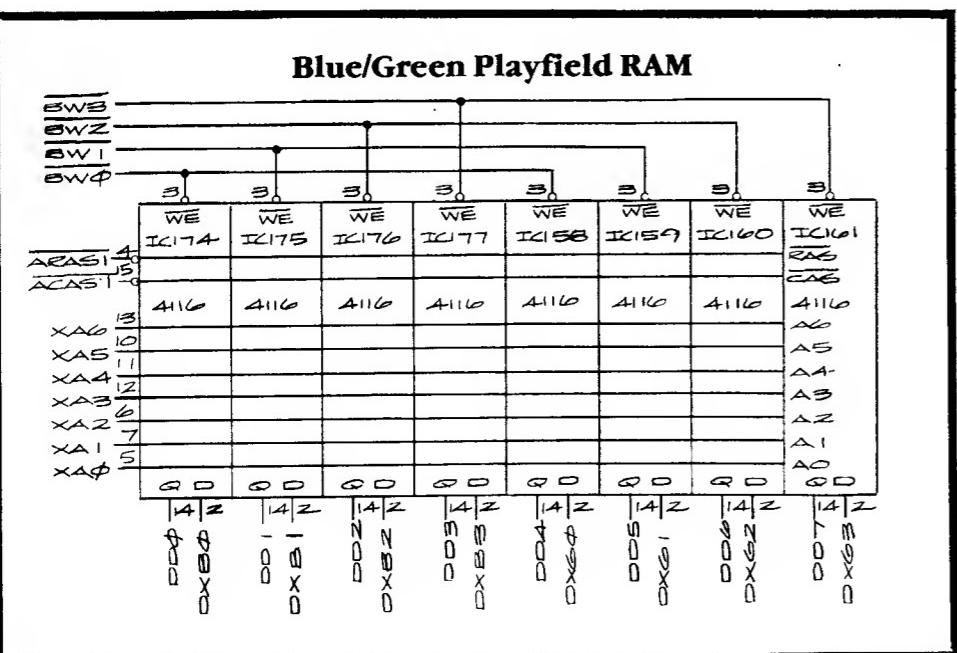
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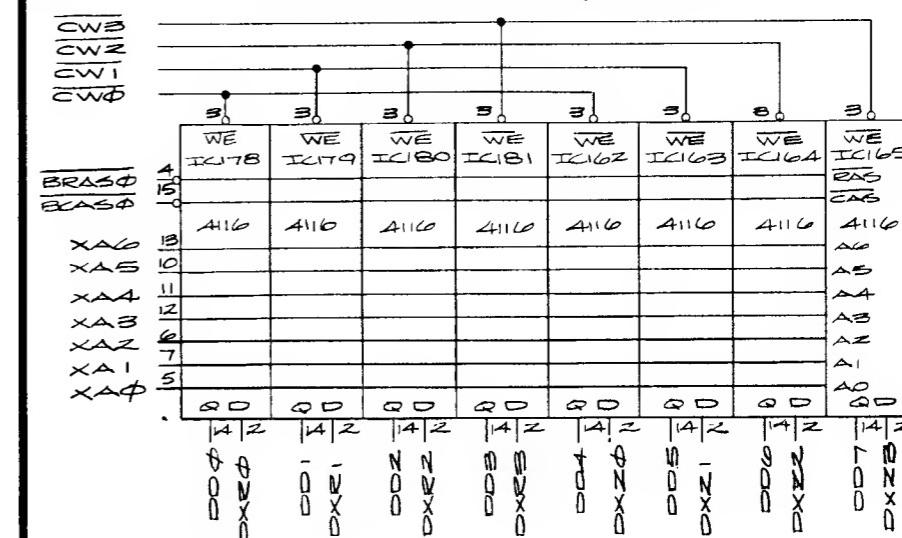
Red/Shade Playfield RAM



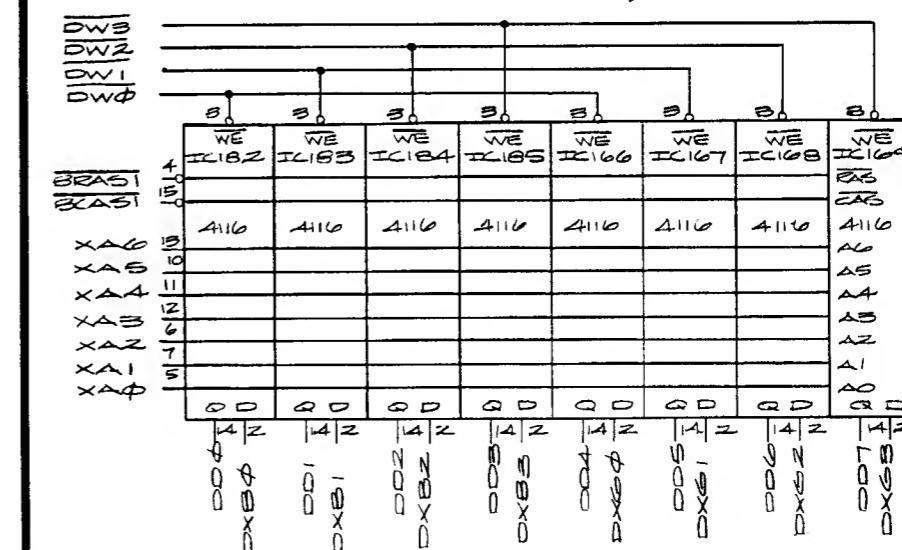
Blue/Green Playfield RAM



Red/Shade Motion Object RAM



Blue/Green Motion Object RAM



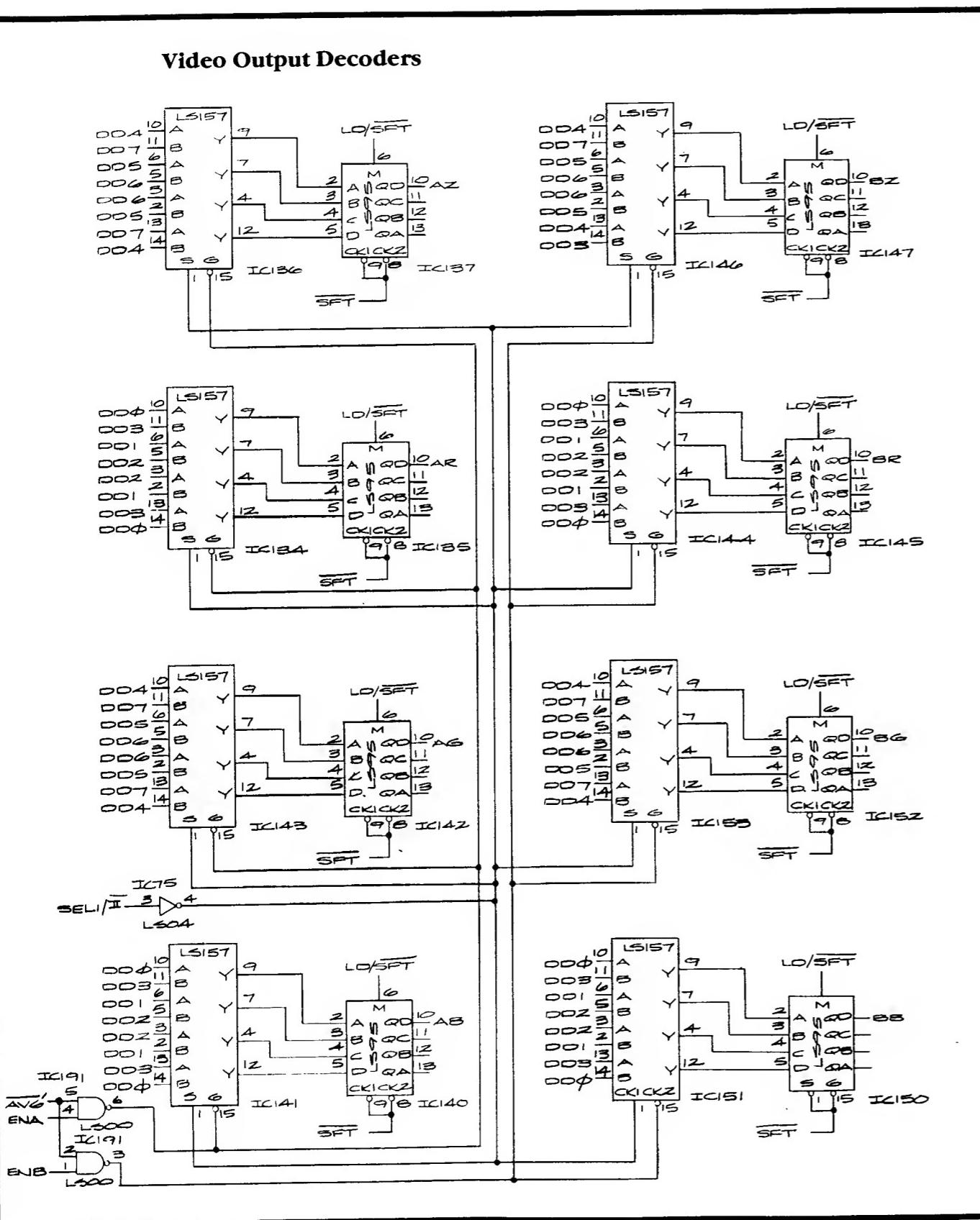
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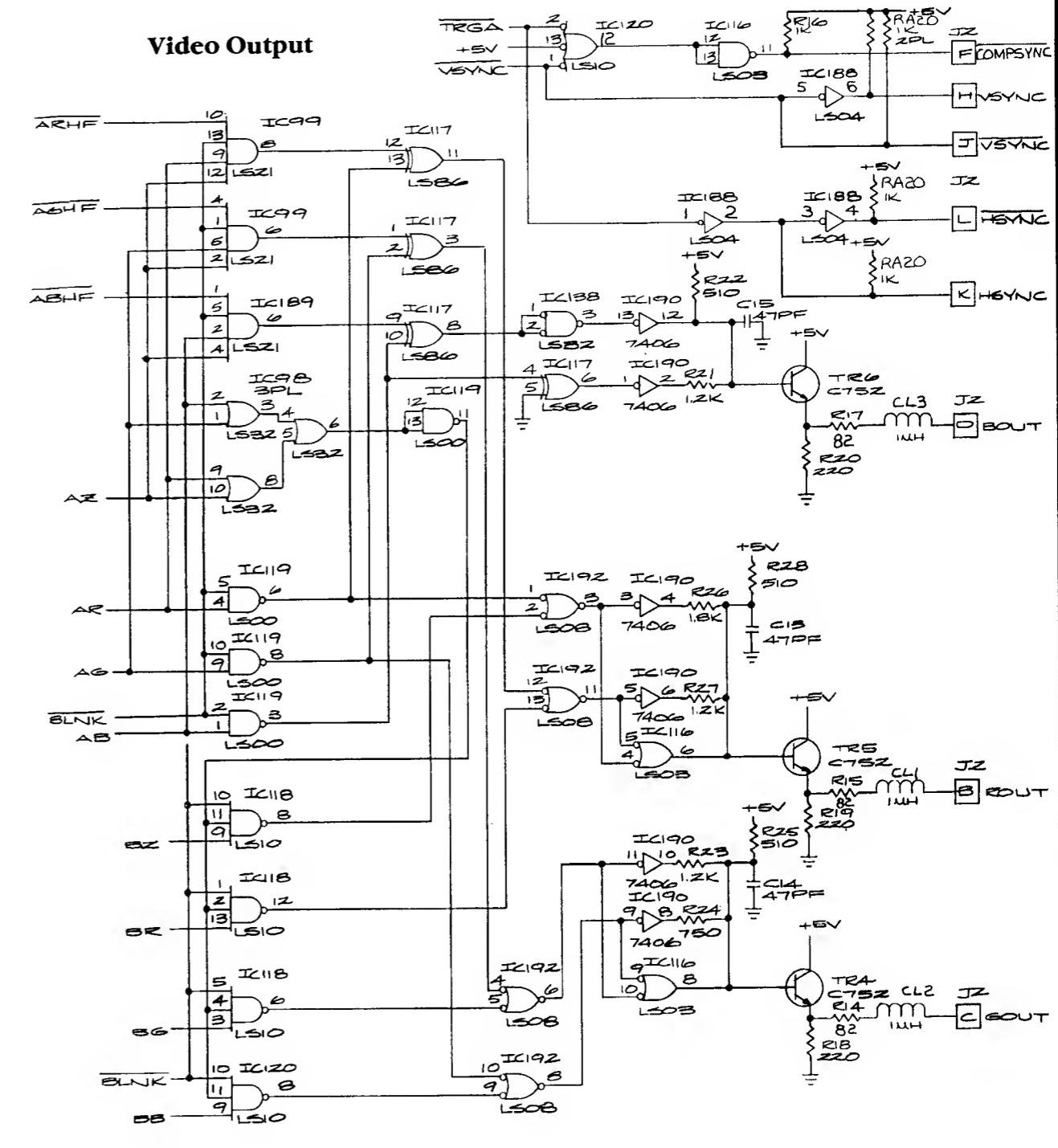


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Video Output Decoders



Video Output

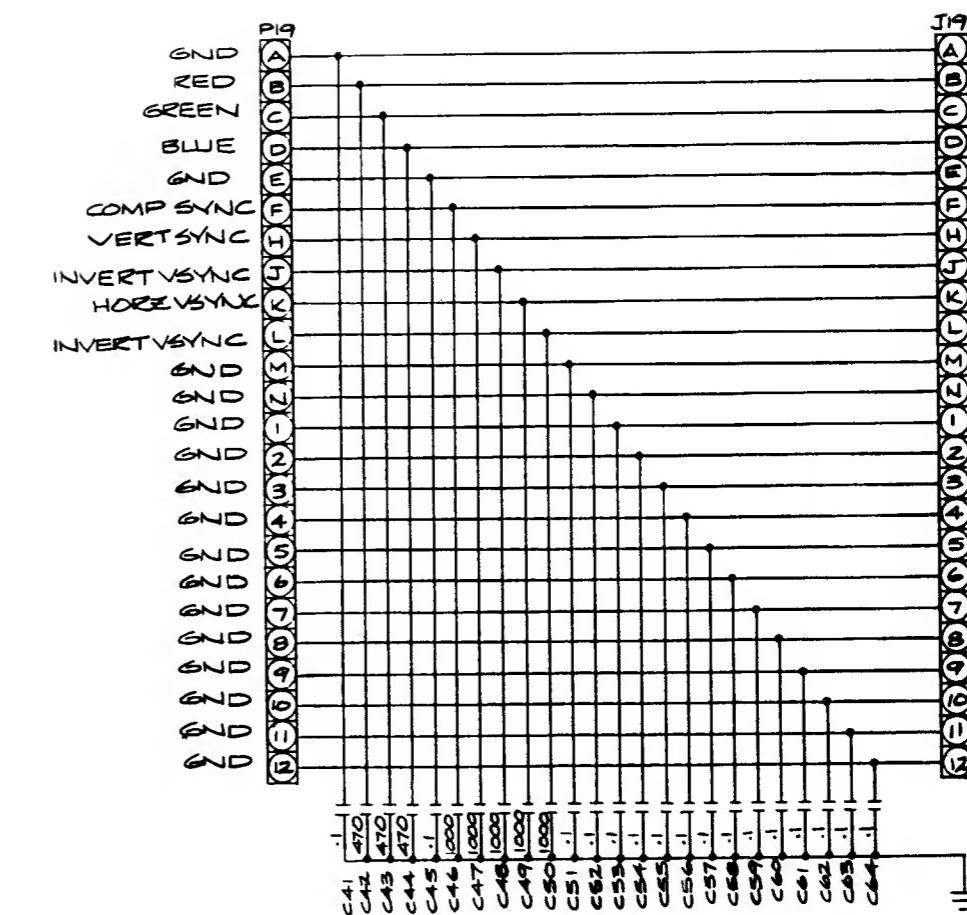
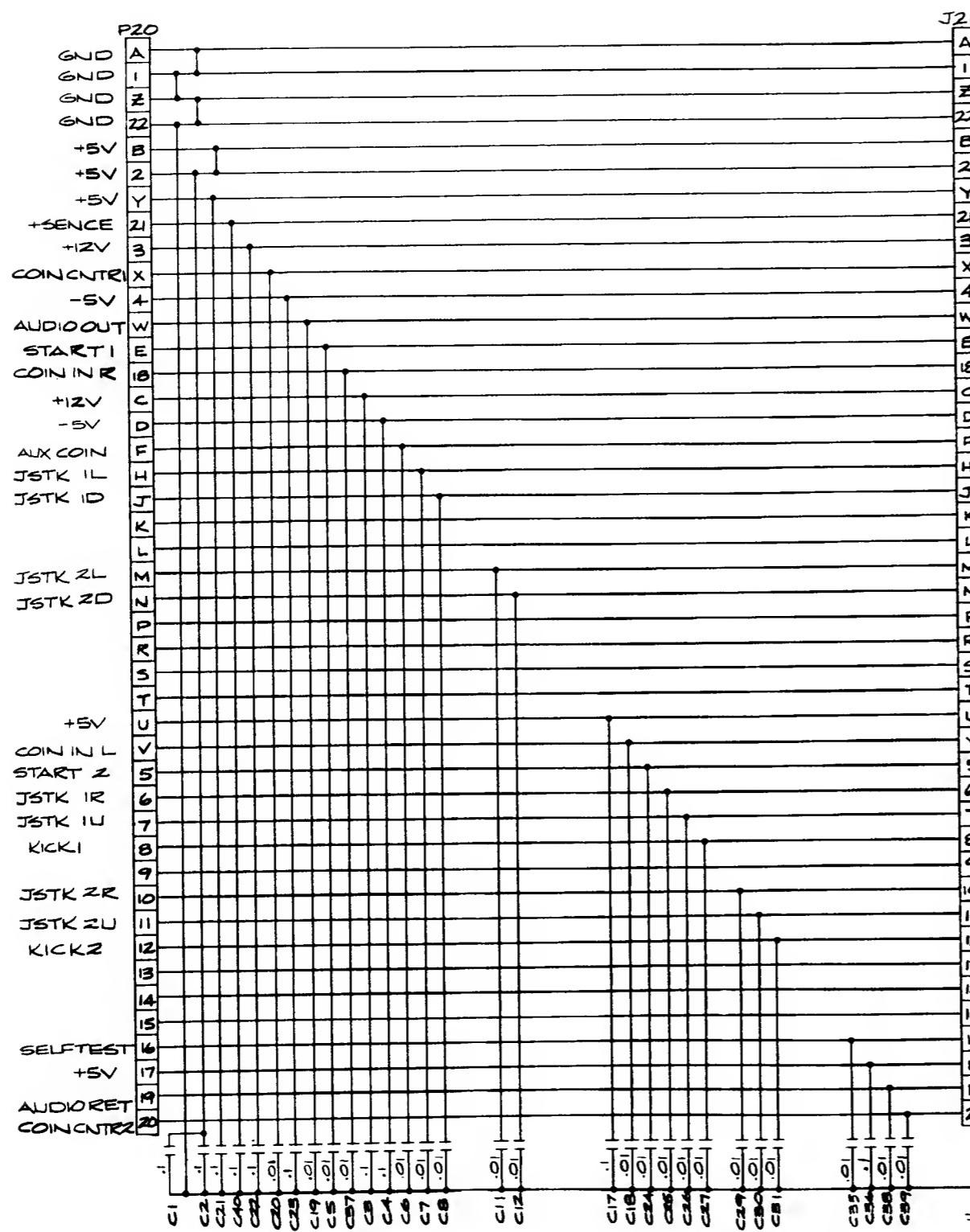


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Arabian EMI Shield PCB Schematic Diagram



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